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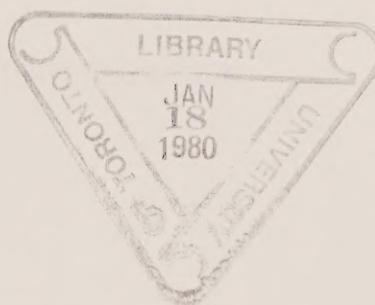
LAND USE PROGRAMS IN CANADA

NORTHWEST TERRITORIES

AUGUST 1979

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Faculty of Environmental Studies
University of Waterloo



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LIST OF ABBREVIATIONS

| | |
|--------|--|
| ACND | Advisory Committee on Northern Development |
| AESC | Arctic Environmental Steering Committee |
| ALUR | Arctic Land Use Research |
| AWAC | Arctic Waters Advisory Committee |
| BRC | Baffin Region Council |
| BLT | Block Land Transfer |
| BNA | British North America |
| CAAC | Central Arctic Area Council |
| CARC | Canadian Arctic Resources Committee |
| CMHC | Canada Mortgage and Housing Corporation |
| COPE | Committee for Original People's Entitlement |
| CWS | Canadian Wildlife Service |
| DEW | Distant Early Warning |
| DFO | Department of Fisheries and Oceans |
| DHW | Department of Health and Welfare |
| DIAND | Department of Indian Affairs and Northern Development |
| DOE | Department of the Environment |
| EAMES | Eastern Arctic Marine Environmental Study |
| EARP | Environmental Assessment and Review Process |
| EIS | Environmental Impact Statement |
| EMR | Department of Energy, Mines and Resources |
| EMS | Environmental Management Service |
| EPS | Environmental Protection Service |
| FEARO | Federal Environmental Assessment Review Office |
| GNWT | Government of the Northwest Territories |
| HBC | Hudson's Bay Company |
| IBNWT | Indian Brotherhood of the Northwest Territories |
| IBP | International Biological Program |
| ICSU | International Council of Scientific Unions |
| IEE | Initial Environmental Evaluation |
| ITC | Inuit Tapirisat of Canada |
| LUAC | Land Use Advisory Committee |
| MAB | Man and Biosphere Program |
| NCPC | Northern Canada Power Commission |
| NWTMA | Northwest Territories Metis Association |
| ONC | Office of Native Claims |
| RSCC | Regional Screening and Coordinating Committee |
| SSCZ | Shipping Safety Control Zone |
| TC | Transport Canada |
| UNESCO | United Nations Educational Scientific and Cultural Organization |
| WARM | Western Arctic Regional Municipality |

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I. INTRODUCTION

Land use planning in Canada is a complex process to which many governmental departments and agencies contribute. This report on the NWT is the twelfth and final volume in a series encompassing each of the provinces and territories.

In this report, the roles of the federal and territorial agencies engaged in land use planning and/or land management in the NWT are outlined and the pertinent legislation is identified and discussed. In addition, concerns and issues regarding land use and land management are detailed. Data are presented in both metric and imperial units. The format of the report is designed to allow the reader to refer to only specific topics if desired.

Chapter II provides an historical introduction to the economic, political and social development of the NWT, (including a brief outline of the current organization of the GNWT). Chapter III looks in more detail at the central issue of native land claims, and outlines the proposals put forward by native organizations. Chapter IV discusses the administration and management of land use in the NWT, and Chapter V examines the administration and use of the territory's water resources. Environmental problems and programs are outlined in Chapter VI. Subsequent chapters examine current governmental programs, relevant legislation and trends within various land use sectors. These are: agriculture; forestry; communities; tourism and recreation; parks; fish and wildlife; energy resources, mining and quarrying; and transportation. A summary and conclusion is presented in Chapter XV. The information presented in this report is based on discussions with federal and territorial officials and on reports that were made available to the authors. The land use planning process is in a continuous state of change and reorganization. Consequently this description of its state in the NWT is current only to August 1979.

AREA

The NWT covers an area of 3 379 684 km² (1,304,903 mi.²) or nearly 40% of Canada's land area. Of this total, approximately 133 294 km² (51,465 mi.²) is freshwater. Surface land uses in the NWT are outlined in Table 1.

PHYSIOGRAPHY²

The geological and physiographic core of the NWT is the Canadian Shield which is largely composed of granite and granite gneisses with jointing imparting a characteristic topographic grain to the landscape. Much of the shield is buried by more recent deposits but its northern boundary crosses the southern Arctic islands, and in the west cuts through Great Bear and Great Slave lakes. Sandstones, limestones and dolomites overlie shield rocks in the Thelon and Athabasca plains, the hills north of Great Bear Lake and in central Victoria Island. Faulting in the shield has been widespread and this is expressed topographically by the straight coasts of Hudson Strait, Frobisher Bay, northeast Southampton Island and many other locations. See Map 1.

The highest point in the NWT is Mount Sir James MacBrien at 2 762 m (9,062 ft.), which is found in the western mountains near the Yukon Territory border. Many of the Arctic islands house remnant ice fields. The approximate height of Penny ice cap on Baffin Island is 2 057 m (6,750 ft.), while Barbeau peak on Ellesmere Island is the highest point in the Arctic islands at 2 616 m (8,584 ft.).

¹ Statistics Canada, Canada Year Book 1976-77 Special Edition.

² Based on J.B. Bird, "The Physical Characteristics of Northern Canada," in W.C. Wonders (Ed.) The North, Studies in Canadian Geography, University of Toronto Press, 1972.

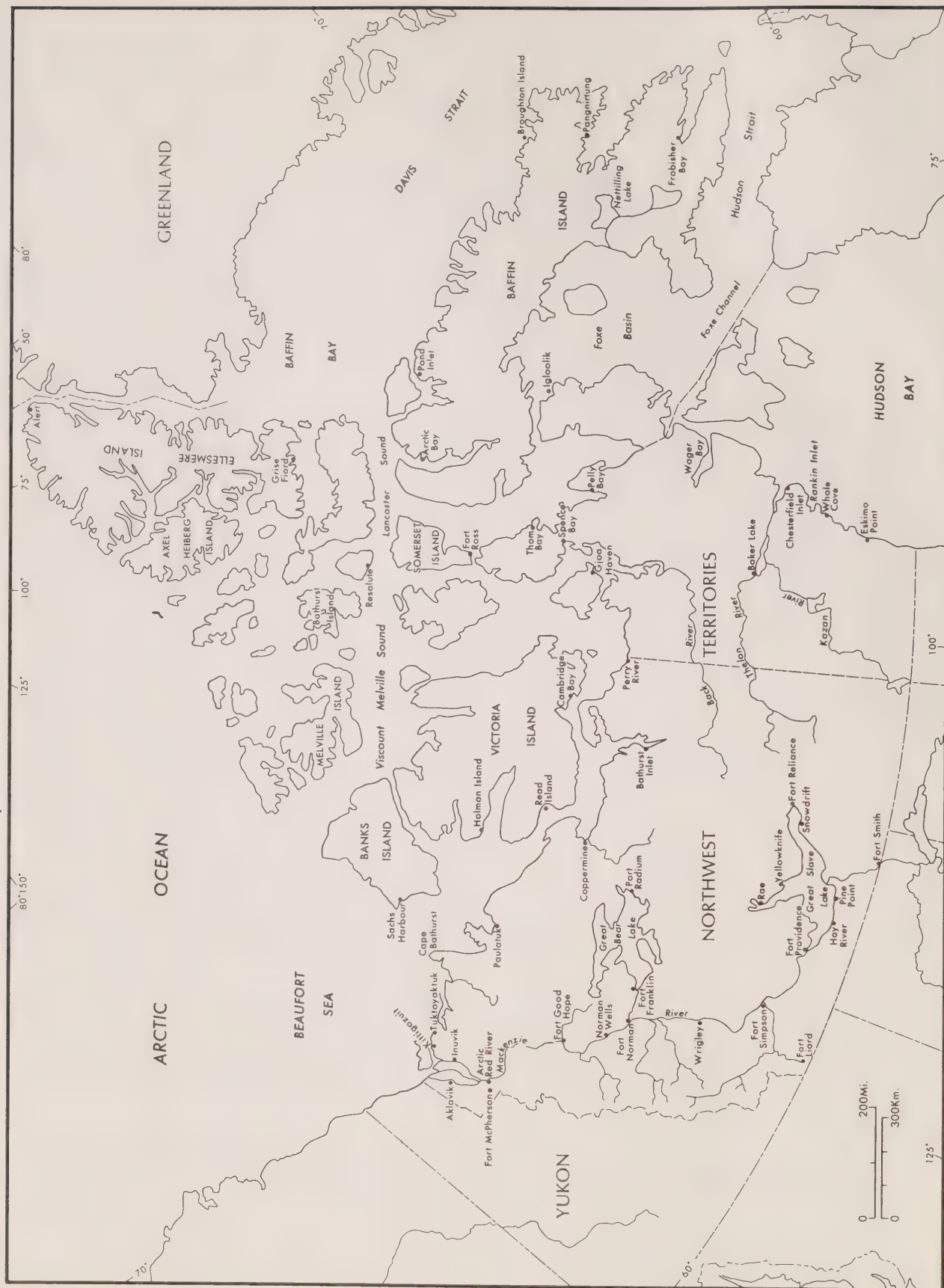
TABLE 1
Surface Land Uses in the NWT

| | Square Kilometers | Square Miles | Hectares (x10 ³) | Acres (x10 ³) | Percentage of Total |
|---------------------------|----------------------|-----------------|---------------------------------|------------------------------|------------------------|
| <u>Total Area a</u> | 3 374 684 | 1,304,903 | 337 968 | 835,137 | 100.0 |
| Land | 3 246 390 | 1,253,438 | 324 639 | 802,200 | 96.1 |
| Water | 133 294 | 51,465 | 13 329 | 32,938 | 3.9 |
| <u>Agriculture b</u> | | | | | |
| Total Area of Holdings | 2.4 | 0.92 | 0.24 | 0.59 | - |
| Improved Land | 0.9 | 0.36 | 0.09 | 0.23 | - |
| Unimproved Land | 1.4 | 0.14 | 0.14 | 0.36 | - |
| <u>Forestry c</u> | | | | | |
| Total Forest Land | 307 000 | 119,730 | 30 700 | 76,627 | 9.3 |
| <u>Parks</u> | | | | | |
| National Parks | 42 605 | 16,450 | 4 260 | 10,528 | 1.3 |
| Other Land | 2 906 683 | 1,122,270 | 240 668 | 718,252 | 89.4 |

Sources:

- a Statistics Canada, Canada Year Book 1976-77, pp. 32-33.
- b Statistics Canada, 1976 Census of Canada Vol. 11, Agriculture, Catalogue 96-800.
- c M.J. Bowen Canada Forest Inventory 1976, Forest Management Institute of Canada (1978).

Map 1. The Northwest Territories



Erosional and depositional landforms associated with the Pleistocene glaciations dominate much of the scenery of the NWT. The alpine landscapes of east Baffin Island are due to pronounced mountain glaciation. Mountains composed of crystalline rocks, for example, those on Ellesmere Island, show striking erosional glacial forms, while those of sedimentary rocks, as on Axel Heiberg Island, show very weak glacial landforms. Extensive drift areas are preserved in the Shield and on eastern Victoria Island. Fluvioglacial deposits are widely distributed in Keewatin and eastern Mackenzie while outwash deposits from ice are particularly important in the Mackenzie lowlands. Marine transgression flooded many coastal areas as the ice withdrew, and shore zone features and sediments which subsequently developed are now well above sea level due to post glacial crustal rebound. Emergence in the Hudson Bay area is continuing.

All of the NWT is subject to permafrost. This phenomenon is divided into continuous and discontinuous zones with the tree line as an accepted southern boundary of perennially (i.e. continuously) frozen ground. In the discontinuous zone, permafrost is generally restricted to north facing slopes, treeless ridges which are blown clear of snow in winter and lowlands where poor drainage has led to the development of organic soils. Thermokarst, the uneven settling of the ground, develops where ground ice thaws and moisture can drain away. Solifluction, a geomorphological process of mass movement, is common in the NWT and is induced by frost and flow associated with high moisture content of surface materials. Materials are moved downslope through this process. As an areal phenomenon, solifluction is thought to be particularly active on Banks Island and in the Sverdrup and Parry Islands.

HYDROLOGY

Streams and rivers in the NWT begin to flow in late May or June and often rise to peak discharge within two weeks. Discharge decreases almost as rapidly and remains at a low stage during the summer.

The maximum monthly flow on the lower Mackenzie and its major tributaries is about five times higher than the minimum monthly flow, but this ratio is more exaggerated in mountainous streams. Excluding the eastern seaboard, the annual runoff throughout Arctic Canada is under 15 cm (6 in.) or about half the average for the country. On the Arctic islands it is less than 10 cm (4 in.).

II. HISTORICAL CONTEXT

The purpose of this chapter is to set the stage for the discussion of land use programs in the NWT. "Historical Context" is divided into two parts: Settlement and Administration, and Land Use and Economy. The first section deals with native cultures, contact and penetration by European explorers, settlement, and jurisdictional history. A brief summary of the present governmental structure of the GNWT is included. The second section describes the land uses and economic activities that have dominated the history of the NWT. These are presented roughly in order of their appearance, but there is a wide chronological overlap.

SETTLEMENT AND ADMINISTRATION

PREHISTORIC NATIVE CULTURES¹

From about 40,000 B.C. to historic times people have migrated across the Bering Strait to reach northern North America. These people were the forerunners of four prehistoric cultures, commonly known as the Denbigh, Pre-Dorset, Dorset and the Thule, who preceded the present-day Inuit of the NWT.

The Denbigh, from 3000 to 1700 B.C., were bearers of the Arctic Small Tool Tradition. Their most distinctive archaeological remains are the foundations of oval shaped homes, with stone hearths still intact.

¹ Based on K.J. Crowe, A History of the Original Peoples of Northern Canada, 1974; D. Depape, W. Phillips and A. Cooke, A Socioeconomic Evaluation of Inuit Livelihood and Natural Resource Utilization in the Tundra of the Northwest Territories, 1975; R. McGhee, "An Individual View of Eskimo Prehistory", 1976; D.A. Davidson, "The People in the North", 1973; J.K. Naysmith, Land Use and Public Policy in Northern Canada, 1975.

From 1700 to about 800 B.C., individuals of the Pre-Dorset culture lived in small settlements of skin tents and houses built with sod or snow walls. The Dorset culture flourished between 800 B.C. to A.D. 1000. This culture may have been responsible for the introduction of the snow house.

The Dorset disappeared between A.D. 800 and 1300 and were replaced by the Thule culture. This fourth group also originated in the Bering Sea area. Its individuals migrated westward in pursuit of the Baleen whale and probably contributed to the extinction of the Dorset. The technology of the Thule was characterized by subterranean winter houses built of stone, dogs and sleds, umiaks, kayaks, and the bow and arrow. The historic Canadian Inuit inherited this technology from the Thule culture which faded with a decline in whaling. When Europeans arrived, only the Inuit inhabited the tundra.

The distribution of the various tribes of historic Inuit is shown in Map 2. The tribe was a group of scattered bands with similar customs and language, the members of which intermarried.

Native Indians lived south of the treeline, in what is now the south-east NWT. The Indian tribes, shown in Map 3, were mainly of Athapaskan and Tlingit linguistic groups. Although some groups lived close to the treeline, generally they were a woodland people, and rarely ventured into the barren grounds.

EUROPEAN EXPLORATION²

The exploration of the NWT by Europeans can be divided into six themes. These are presented in Table 2.

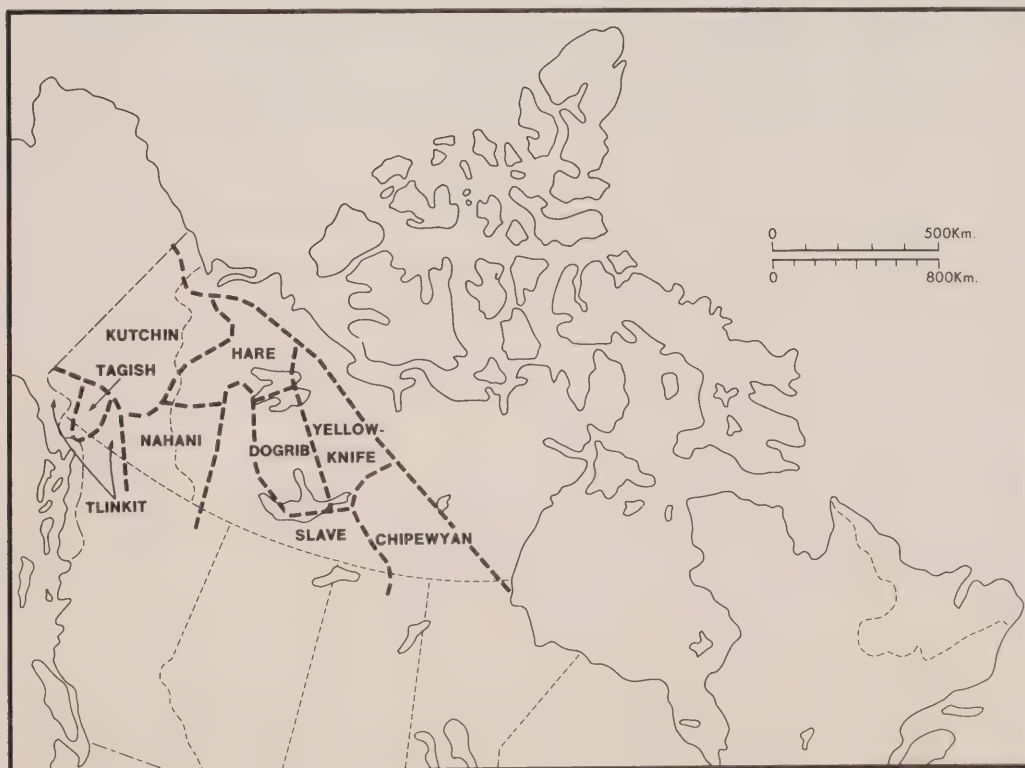
² Based on R.C. Scace, Exploration, Settlement and Land Use Activities in Northern Canada; A Historical Review, Vol. 1, 1975.

Map 2. Distribution of Historic Inuit Tribes
in the Northwest Territories



Source: After Jenness.

Map 3. Distribution of Historic Indian Tribes
in the Northwest Territories



Source: After Jenness.

TABLE 2
Themes in Geographical Exploration

| Sub-Theme | Phase |
|--|---|
| Search for a Commercial Northwest Passage 1576 - 1748 | <ol style="list-style-type: none"> 1. Probing the Eastern Entrance to the Arctic 2. Penetrating Hudson Bay |
| Fur Trade Era 1747 - 1883 | <ol style="list-style-type: none"> 1. Hudson's Bay Company Early Era 2. Hudson's Bay and Northwest Company Rivalry 3. Hudson's Bay Company Post 1821 Union |
| British Admiralty Expeditions | <ol style="list-style-type: none"> 1. Approach by Sea 2. Approach by Land 3. Franklin Expedition and Subsequent Searches |
| American and Norwegian Interest | <ol style="list-style-type: none"> 1. American Explorers 2. Norwegian Explorers |
| Canadian Sovereignty and Scientific Expeditions | <ol style="list-style-type: none"> 1. Overland Exploration 2. Exploration by Sea |
| Scientific Exploration | |

Source:

R. Scace, 1975, p. 25.

1. Search for a commercial Northwest passage 1576-1748: The explorers of this era were more interested in finding a route to the trade markets of the Orient than in the land masses that encumbered them. Frobisher's 1576 voyage marked the beginning of European exploration and penetration of the NWT. This period's termination may be dated by Cook's assertion that no low-latitude Northwest passage could possibly exist.
2. Fur-Trade era 1670-1818:
Exploration during this stage was again commercially motivated; much of it was due to the rivalry between the Hudson's Bay Company operating out of Hudson Bay, and the Northwest Company operating out of Montreal. Mackenzie's 1789 expedition along the river that now bears his name was the era's most significant event.
3. British Admiralty Expeditions 1818-1859:
These voyages of exploration were conducted to map and make known the Canadian north. Most of the Canadian Arctic archipelago and the entire northern coastline of the continent were mapped by 1859.
4. Exploration with many motives 1860-1914:
The dominant motives of this period were to reach the north pole, develop the whaling industry and assert Canadian sovereignty. English exploration had given way to American and Norwegian by 1876.
5. Modern Era 1914-1944:
The objectives of this era were to acquire scientific knowledge and to demonstrate sovereignty as well as to explore. Larsen's navigation of the Northwest Passage in 1944 signifies the era's culmination. The value of geographical exploration faded as settlements grew in number and dependable water transportation increased.

6. Scientific Exploration:³

The first International Polar Year (1882-1883) encouraged research activities by the Germans in Cumberland Sound, the Americans on Ellesmere Island and the British at Fort Rae. Various interests were represented by eight NWT research expeditions from 1899 to 1903. These included the work of Svedrup for Norway, and of Stefansson and Anderson who were jointly sponsored by the American Museum of Natural History and the Geological Survey of Canada (GSC) from 1908 to 1912. The GSC increased its activities in the 1890s in search of recoverable minerals in the Keewatin District, Hudson Strait, Baffin Island and the Great Slave Lake region. An important expedition was led by Stefansson from 1913 to 1918.

It carried out scientific studies and helped to complete the topographic mapping of the western Arctic. Research continued under the impetus of a second International Polar Year (1932-1933) and the military needs of World War II. Interest in mineral resources was renewed around this time and the GSC undertook an extensive aerial reconnaissance of the Arctic Islands in 1947.

In recent years, applied research has been undertaken in connection with petroleum exploration while pure research has delved into biophysical and ecological topics. By 1972 industry was involved in gathering baseline petroleum-related data, and environmental information upon which to base applications for pipeline rights-of-way. Studies were conducted by private consultants, the industry sponsored Environment Protection Board, and by the Task Force on Northern Oil Development.

³ Based on Scace, 1975, pp. 44-46; R.F. Keith et al (eds.), Northern Development and Technology Assessment Systems, 1976, p. 27; A.R. Lucas and E.B. Peterson, "Northern Land Use Law and Policy Development: 1972-8 and the Future", 1978.

Government and industry have attempted to coordinate research efforts since 1974. Other groups, particularly native organizations and environmental interest groups, have also begun to contribute to research efforts.

SOVEREIGNTY⁴ AND DEFENCE⁵

In 1670 Britain granted Rupert's Land to the Hudson's Bay Company by royal charter. This grant included all remaining British Territories west of Hudson Bay as far as British Columbia and the 141st meridian, south to the 49th parallel, and north to the Arctic coast. The BNA Act and the Rupert's Land Act of 1867 facilitated an Order-in-Council in 1870 which declared the North-Western Territories and Rupert's Land to be part of Canada and hence subject to the Canadian Parliament.

Whaling and mining interests initiated the transfer in 1880 of all other British Territories in the Arctic to Canada. British claims to the land, including the archipelago, were challenged by American and Norwegian interests during the 1880s. Canadian sovereignty was legally vulnerable for little attempt had been made to manage or use the remote northern areas.

Governmental activity increased in 1895 with the passage of legislation to establish four provisional administrative districts - Ungava, Yukon, Mackenzie and Franklin. Political boundaries evolved to their present state in 1912. American threats to Canadian sovereignty and authority

⁴ Based on Scace, 1975; E.J. Dosman, The National Interest, 1975; K.P. Beauchamp, Land Management in the Canadian North, 1976; E.W. Rees, "Development and Planning North of 60°. Past and Future", 1978.

⁵ Based on Mr. Justice Thomas R. Berger, Northern Frontier Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry, 1977; K.I. Rea, The Political Economy of Northern Development, 1976.

were maintained through American whaling in Hudson Bay and the Beaufort Sea, and Peary's claim to the north pole region in 1909. In order to emphasize Canadian sovereignty, the North-West Mounted Police established posts at Fullerton, Herschel Island, and Fort McPherson in 1903. Records of annexation were deposited on numerous islands during expeditions and federal agents subsequently began to enforce Canadian law in the NWT.

The Eastern Arctic Patrol was created in 1922, partially in response to Denmark's denial of Canadian sovereignty on Ellesmere Island. Canadian police posts and post offices were established throughout the Arctic islands by 1928 through the work of the Patrol. The institution of a NWT council in 1921 helped to consolidate Canadian control over the region.

Prior to World War II the federal presence was further demonstrated through support for scientific exploration and the enforcement of restrictions on the use of wildlife. During and after the war the Canadian and American governments cooperated on several military projects. These included:

- the construction of an air route from Edmonton to Norman Wells to carry freight and troops;
- the Canol project. This involved the enlargement of the Norman Wells oil field and the construction of a pipeline from the Mackenzie River to Whitehorse. It was, however, never used for its designated purpose of providing oil to the U.S. military in the northwest during an emergency;
- improvements for shipping on the Mackenzie River;
- construction of the Mackenzie Highway from Grimshaw, Alberta, to Great Slave Lake; and

- The Distant Early Warning (DEW) line of radar stations to detect foreign aircraft in polar regions. This network was constructed during 1955 to 1957.

The influence of the American military in the NWT faded in the 1960s as did that of the Canadian Department of National Defence which also withdrew many personnel.

Canadian claim to the NWT, including the Arctic Islands, is now secure in international law, but some contention persists over the issues of territorial waters, floating ice, continental shelf, submarine passages and airspace. The federal Task Force on Northern Oil Development, established in 1968, recommended an increased administrative and infrastructural presence by the Canadian government in the NWT. In 1969, U.S. coastguard vessels accompanied the S.S. Manhattan in its attempt to navigate the Northwest Passage, without consulting the Canadian government. Canadian claims have subsequently been reinforced with the passage of legislation to regulate the use of northern waters.

ADMINISTRATION

History of Government⁶

Prior to 1870 the area which now includes the NWT was administered by the Hudson's Bay Company (HBC). An Imperial Order-in-Council of that year admitted Rupert's Land and the North-Western Territories into the Dominion and gave the federal parliament jurisdictional authority over both areas. In 1872 the Dominion Lands Act gave the Governor-in-Council the power to withdraw lands for reserves and to sell mineral rights, mainly to encourage settlement in the west. Until World War I the

⁶ Based on Rees, 1978; Rea, 1976; Crowe, 1974; Naysmith, 1975.

federal government's role in the north was mainly regulatory: to maintain peace and order among residents, to accommodate fur trade and mining developments, to conduct surveying and mapping, and to control transportation. In the latter part of the 19th century, the federal role in northern districts was confined to the administration of Indian affairs and the regulation of fisheries, hunting and trapping. These functions were enforced by the North-West Mounted Police.

The 1905 NWT Amendment Act established a Commissioner and Council form of government, but administration remained in the hands of the RCMP until 1921. The first council which was appointed in that year, consisted of seven members and was chaired by the Deputy Minister of the Department of the Interior who also acted as Commissioner. For a decade the council held only housekeeping responsibilities while a branch of the Department of the Interior established local offices in the Mackenzie District and pursued field work. Mining activity in the late 1930s prompted the development of GNWT responsibilities beyond those of licencing scientists and explorers, regulating fur exports and protecting native archaeological resources.

Before World War II federal policy in the NWT was designed to control economic development and preserve stability. Greater interest in the promotion of economic development and resource exploitation was shown in 1948 when the Advisory Committee on Northern Development, composed of Deputy Ministers from various relevant departments, was established. In 1950 the Territorial Lands Act was promulgated to provide a new format for the administration of federal lands and in 1951 the NWT Council was reorganized to include elected members and empowered to meet in the north as well as in Ottawa. The Department of Northern Affairs and Natural Resources was established in 1953 to develop policy and ensure orderly development. Nevertheless, in the 1960s administration continued to be confused due to the involvement of numerous federal departments and agencies. The Carrothers Report of 1966 recommended

that the GNWT be given greater authority. Most of the report's recommendations were accepted, including the proviso that the seat of territorial government be moved to Yellowknife. This was accomplished in 1967.

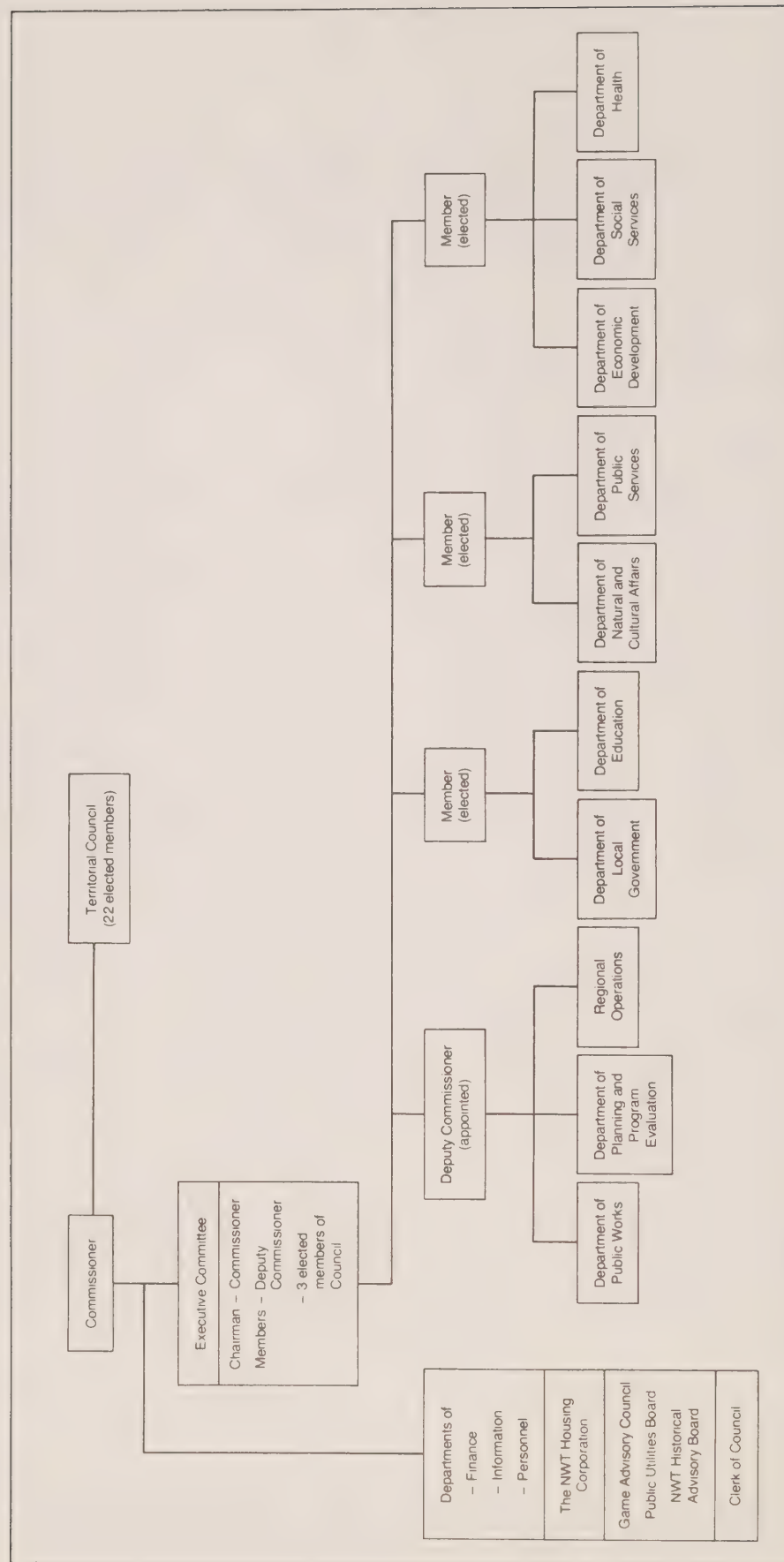
Current Governmental Structure⁷

The NWT Act outlines the political structure of the NWT. Under this statute, a Council or Legislative Assembly is elected for four-year periods to represent NWT residents. The size of the Council has recently been increased to 22 members and the Commissioner-in-Council is now empowered to make Ordinances to increase or decrease the size of the Council within limits of 15 to 25 members. The Legislative Assembly elects its own speaker. Executive power lies with the Executive Committee, a structure first established in 1975. This Committee has until recently been composed of the Commissioner, Deputy Commissioner, an Assistant Commissioner and three of the Legislative Assembly's elected council members. The composition of the committee is currently undergoing change and is unlikely to be finalized until the next territorial election which is scheduled for October 1979. The posts of Assistant Commissioner and Deputy Commissioner are currently vacant and it appears that the former will be abolished. In the meantime the Director of the Executive Office has been appointed as a fifth Executive member. Figure 1 portrays the organization of the GNWT as of May 1, 1979.

The Commissioner administers with advice from the Governor-in-Council, and is accountable to the Minister of DIAND. This federal Minister can withhold assent to legislation passed by the territorial assembly. The

⁷ Based on Lucas and Peterson, 1978; Beauchamp, 1976; A.R. Zariwny, Development of Local Government in the Northwest Territories, 1977.

FIGURE 1
Functional Organization Chart – GNWT



Source: Commissioners Annual Report, in 1977. Updated from discussions with territorial officials, April 1979.

GNWT is, however, moving toward assumption of greater responsibilities through use of wider legislative and administrative powers. As yet, a party system similar to other Canadian legislatures has not evolved in the NWT. Although the Commissioner, as the federal government's representative, has a considerable degree of power, government is conducted through cooperation between the Council, Executive Committee and the Commissioner.

Territorial ordinances are subject to the NWT Act and other federal Acts, and may be disallowed by the Governor-in-Council within one year of passage. The Department of Indian Affairs and Northern Development Act gives the Minister of DIAND responsibility for the economic and social development of the territory and for the control and management of vacant Crown lands. Revenue is provided to the NWT by the federal government in the form of five-year loans.

Under the NWT Act, the federal government retains responsibility for land and natural resources (mines, minerals and royalties). Federal expertise is provided to the territory to assist in the administration of its responsibilities which include game and wildlife management, direct taxation, education, municipal administration, justice, hospitals, agriculture and the surface use of some public lands. There is also a consolidated revenue fund at the disposal of the Governor-in-Council. Some federal statutes are administered by the GNWT, for example, those requiring the provision of certain services to native people.

In 1976 the Committee on Devolution was established to make recommendations for policy change based on community concerns and to aid the GNWT in its attempt to decentralize functions and authority. Charles Drury was appointed in 1977 by the federal government as the first "Special Representative for Constitutional Development in the Territories". His mandate is relatively open-ended, and provides for consideration of the concerns of native people, industry and the territorial government.

The federal government released a statement entitled "Political Development in the NWT" in 1977, and in response, the NWT Council presented to the Minister a document that urged the transfer of all provincial-type responsibilities to the GNWT. On March 28, 1979, the Legislative Assembly adopted a position paper on "Constitutional Development in the NWT." This quite detailed document advocates provincial status for the NWT within ten years and immediate reshaping of the Executive Committee to make it a wholly elected body. It also suggests that the Commission be removed from policy making, and that he function as a figurehead in the form of a Lieutenant Governor.

SETTLEMENT⁸

Very few people lived in the NWT prior to European penetration and their numbers fluctuated as they were dependent upon the vagaries of hunting, fishing and trapping.

Thirteen missions were established in the Mackenzie Valley from 1851 to 1900 and all were interconnected by water transportation. At that time there were only a few isolated trading posts in the eastern Arctic. In 1909 the HBC established its first post at Wolstenholme on the Ungava Peninsula. When the present boundaries of the NWT were established in 1912, they encompassed over 6,000 people, very few of whom were white. In that year trading posts were established at Chesterfield Inlet and Pond Inlet. In the first 30 years of the 20th century, fur trade posts were established on the mainland coast, Baffin Island and other low Arctic islands. RCMP posts were also established on the mainland coast and in the eastern Arctic.

⁸ Based on Rea, 1976; Davidson, 1973; Scace, 1975; Depape, Philips and Cooke, 1975, R.M. Bone, "The Population of Northern Canada", 1972.

Initially, the native people visited the missions and posts "from time to time to sell furs, receive medical aid or attend religious services, while continuing to live and spend most of their time on the land in outpost camps".⁹ Gradually they began to settle near these centres to be close to the services that they offered. This process accelerated for in the 1930s as the viability of land based activities faded due to depletion of wildlife and falling fur prices. The Inuit population of the NWT thus came to be concentrated in permanent settlements along the mainland coast and southern Arctic islands. The Indians similarly concentrated in communities in the Mackenzie Valley, which is today the most populous region of the NWT.

The native population may have declined by 50% as a result of the impacts associated with the fur trade. Since people have concentrated in communities and have benefited from health care facilities, which were widely upgraded in the 1950s, the natural rate of growth has risen dramatically (see Table 3). The birth rate peaked in 1961 but remains far above the national average, while the death and infant mortality rates continue to fall. The statistics shown in Table 3 are, however, distorted by the inclusion of transient populations. In 1971, the native Indian population of the NWT was 7,200, over 30% of the total (compared to 14% in the Yukon).

In 1956, Northern Service Officers were sent by the federal government to administer Inuit communities. They helped to form Eskimo Councils which have evolved into elected Settlement Councils. Heavy immigration of white, southern Canadians to the NWT began during the 1920s when oil discoveries at Norman Wells attracted labourers. In the following decades, mineral resource exploitation, war projects and expanded governmental administration have been major drawing factors.

⁹ Depape, Philips and Cooke, 1975, p. 13.

TABLE 3
Population of the NWT
(Canadian rates in brackets)

| | 1921 | 1931 | 1941 | 1951 | 1961 | 1971 |
|--------------------------|-------|-----------------|-----------------|-----------------|-----------------|----------------|
| Birth Rate | | 46.1 (23.2) | 26.3 (22.4) | 40.6 (27.2) | 48.6 (26.1) | 37.0 (16.8) |
| Death Rate | | 28.8 (10.2) | 25.6 (10.1) | 17.8 (9.0) | 11.4 (7.7) | 6.6 (7.3) |
| Rate of Natural Increase | | 7.8 (13.0) | 0.8 (12.3) | 22.8 (18.2) | 37.2 (18.4) | 30.4 (9.5) |
| Infant Mortality Rate* | | 113.5 (86.0) | 208.9 (61.1) | 107.9 (38.5) | 111.0 (27.2) | 49.0 (17.5) |
| Population | 8,143 | 9,316 | 12,028 | 16,004 | 22,998 | 34,807 |

* Under one year of age per 1,000 live births.

Source:

Rea, 1976, p. 141 and p. 21.

LAND USE AND ECONOMY

NATIVE HUNTING AND TRAPPING¹⁰

Before Europeans arrived, the native people of the NWT depended on their own skills, resources and ingenuity to support themselves in a severe environment. Adaptations to the physical environment varied between Indians and Inuit but a wide variety of coping techniques were used.

¹⁰ Based on Rea, 1976; Naysmith, 1975; Depape, Philips and Cooke, 1975, W.G. Ross, "Inuit and the Land in the Nineteenth Century", 1976.

A large proportion of time was spent in the hunt, during which a great expanse of territory was covered. Groups of people, either bands or tribes, were usually scattered and nomadic. Some groups harvested terrestrial resources, others marine, with the location of these activities being determined by the regular, seasonal movements of game. Typically, the Inuit would live near the sea in winter, hunting walrus at the ice flow edge and seal at breathing holes. Musk-ox would also be hunted inland. In the summer and fall the Inuit became more mobile, following the caribou and migratory birds. Sea mammals such as the beluga whale were also hunted in the summer.

Caribou and seal hunting became more individualistic endeavors after the introduction of firearms, and this contributed to the decline of the group camp as a major economic unit. Hunting became financially motivated as hunters became concerned with attaining trade goods and meeting financial obligations. This led to increased hunting, the subdivision of hunting areas into traplines and further disintegration of the group or band into smaller family enterprises.

Hunting and trapping are still important aspects of northern land use (37% of the Inuit earned their income in this matter in 1969/70) but the pattern of such use has changed considerably. The concentration of population in settlements has been particularly significant. Land based activities are more difficult and expensive to conduct from centralized communities, and with modern technology a few hunters can harvest all the game within a reasonable distance from a settlement. Community life has also provided alternative means of obtaining an income and many natives have turned to wage employment. Some pursue a combination of wage-earning/hunting and trapping, while others cling to the land, not only for the country food and the economic return that it provides, but also to maintain their way of life. Since 1945 the traditional land based activities have become more regulated and dependent on public management and support.

WHALING¹¹

Although the Inuit had been using whale bones and oil for centuries, Europeans did not begin exploitation of this resource until 1610. The English sent the first fleet, and the Dutch, Germans and French soon followed. Whaling gained importance in the early 1700s as it moved into Davis Strait and Baffin Bay. By 1723 there were 350 Dutch, German and Basque ships in Davis Strait.

A decline in whaling at the beginning of the 19th century was followed by renewed interest on the part of the Americans in Hudson Bay and the Scots along the coast of Baffin Island. Whaling was extended by the English into Pond Inlet by 1820, Cumberland Sound by 1840, Jones Sound by 1848 and Ross Welcome Sound in Hudson Bay by 1850.

After 1850 New England whalers began to spend alternate winters in the Arctic. This occupation had a stronger impact on the Inuit, who worked for, traded with and sometimes fought with the whalers. The Inuit were eventually to suffer greatly from the introduction of disease, liquor and from the depletion of wildlife by the whalers.

By the late 19th century whaling had declined in the eastern Arctic as the bowhead became scarce. Whalers turned to hunting other marine and land mammals, mica mining and trading with the Inuit. In 1905 a substitute for whalebone contributed to the decline of whaling and by 1914 the Americans and Scots had left the eastern Arctic.

American whalers discovered the Bering Strait fishery around 1850. From the 1880s to 1907 individuals of many nationalities hunted whales north of the Mackenzie Delta and around Herschel Island in the Yukon.

¹¹ Based on Rea, 1976; Crowe, 1974; Scace, 1975.

In this century, hunting for white and beluga whales has been conducted by the Hudson's Bay Company, the Canadian government and a variety of foreign groups. The last whale fishery closed in Cumberland Sound in 1963.

THE FUR TRADE¹²

History

Trapping white fox for their pelts began in the dying days of the whale fishery. The HBC came to dominate the fur trade through its operations based along the shores of Hudson Bay. The formation of the North-West Company forced it to expand operations inland. Competition between the two companies resulted in the expansion of the trade to the Mackenzie Valley and Great Slave Lake regions.

The early rivalry and strife of the fur trade was stopped when the HBC and the North-West Company amalgamated in 1821 under the title of the former. From 1821 to 1870 the Company extended its trade to the Liard, Nahanni, Beaver and Smith rivers. The monopoly ended in 1870 when Rupert's Land was sold to the Dominion of Canada, although it continued in practice for another 15 to 20 years north of Fort Chipewyan. There were only nine fur trade posts in the NWT in 1870, all of which were in the Mackenzie Valley.

In 1909 the first post specifically intended for trading furs with the Inuit was established by the HBC on the south shore of Hudson Strait in Quebec. Within 15 years similar trading posts were opened from Herschel Island to King William Island, a distance of over 950 km (600 mi.).

¹² Based on Rea, 1976; Naysmith, 1975; Crowe, 1974; Scace, 1975, P.I. Usher, "Fur Trade Posts of the Northwest Territories: 1870-1970", 1976A, and "The Inuit as Trapper: A Case Study", 1976B.

Trade in the 1920s was more competitive than it had been during the previous half century. A rise in fur prices after World War I provided an incentive for independent trappers and traders to develop posts, or to travel through the NWT collecting furs. Most independent traders were limited to the Mackenzie District and southern Keewatin due to transportation costs and the existence of the Arctic Islands Game Preserve. In 1921 there were 140 licenced white trappers in the NWT, and by 1926 there were 500. In 1929 Regulations under the Northwest Game Act stipulated the nature of buildings to be used and the duration of the trade, thereby outlawing itinerant traders. Expansion of permanent posts into the hinterland culminated between 1925 and 1929 during which time there were 217 trading posts in 139 locations in the NWT.

After 1930 the fur trade entered a sharp decline due to overtrapping, new game laws and falling fur prices. By 1950 almost all of the smaller firms had been absorbed by the HBC, although some remained in the Mackenzie Valley, Mackenzie Delta and the Coronation Gulf areas. The trade subsequently began to centralize in larger centres such as Aklavik and Fort Norman. Licences were restricted in 1938 to native Indians, Eskimos and those already holding permits, which essentially put an end to the white trapper of the NWT. Further decline has occurred since, due to the availability of wage labour and settlement life styles. Despite a brief upturn around 1960, the HBC has been closing posts. It maintains a monopoly in the eastern Arctic, while in the western Arctic some communities have recently started cooperatives and private stores are now appearing. The 1850 pattern of HBC posts is essentially unchanged today, although fewer exist.

Impact

The fur trade had a major impact on the pattern of settlement in the NWT and on the life and culture of native people. About 38 of the present 50 population centres were initially fur trade posts. As with whaling,

the trade introduced diseases, depleted wildlife and decimated native populations. The Inuit experience with the trade was later and more rapid than that of the Indians, and their staple, the white fox, was not as severely depleted as the Indians' fur bearers.

In the early years of the fur trade the native people found trapping a lucrative occupation. The standard of living of the Inuit in the Mackenzie Delta was high even by southern standards. Furs were the most valuable export from the NWT until 1946, when the decline in Arctic fox pelt prices caused a wide depression and great hardship. Inuit of the Mackenzie Delta subsequently found they could support themselves by selling muskrat pelts, and competition for this species grew quite intense. This led to the registration of traplines in 1948, and attempts by the HBC to relocate some Inuit in new hunting and trapping areas such as Dundas Harbour on Devon Island. Recently, the ability of trapping to support native people has declined although it remains a major source of resource-based income. The trapping industry that was started on Banks Island in 1916 continues as a successful operation today.

CONSERVATION

Conservation Reserves¹³

The earliest conservation legislation for the NWT was passed by the Territorial Council in 1877 - An Ordinance for the Protection of Buffalo. It was repealed the next year due to inadequate enforcement.

¹³ Based on Scace, 1975, and C.D. Hunt, "Approaches to Native Land Settlements and Implications for Northern Land Use and Resource Management Policies", 1978. The information on other conservation measures is based on Lucas and Peterson, 1978 and Rees, 1978.

In 1883 a Game Protection Ordinance set closed seasons on some birds, and game fur bearing animals, but native people were exempted from observing the Ordinance. The Council subsequently tried to repeal this native exemption in relation to buffalo hunting, but this move was vetoed by the federal government. The first federal legislation regarding conservation in the NWT was the 1894 Unorganized Territories Game Preservation Act which prohibited the hunting of bison and restricted the hunting of other animals. The native people were again exempt from its provisions. In 1906, when the NWT Act repealed all other Acts concerned with the NWT, the Unorganized Territorial Game Preservation Act was replaced by the identical Northwest Game Act.

During the following four decades all game legislation for the NWT was controlled from Ottawa, the policy being designed to prevent Indian dependency on government. From 1909 to 1920 the Commission of Conservation examined the depletion of wildlife in the NWT and prompted a revision of the Northwest Game Act in 1917. This provided better protection of wildlife through: a licencing system for taking furs (natives were exempt from this requirement); full protection of animals such as the bison, musk-ox and elk; and reservation of Victoria Island solely for native use. The Commission also provided the inspiration for the Migratory Birds Convention Act of 1917 which restricted the hunting of all game birds.

In 1920 a bill was passed to establish game sanctuaries, distinct from game preserves which were provided for by the NWT Game Act. By 1938, when licencing was restricted to previously licenced residents and their offspring, the area restricted for native use covered more than 828 099 km² (514,557 mi.²). Between 1918 and 1948 the system of game reserves and sanctuaries grew to cover most of the NWT. The Arctic Islands Preserve was the largest and included virtually all of the Canadian archipelago.

In 1949 responsibility for the protection of game was transferred to the Commissioner-in-Council of the NWT. Following this transfer substantial changes were made in hunting regulations and the system of preserves and sanctuaries was greatly diminished. The 1949 Game Ordinance, which replaced the Northwest Game Act, retained existing federal provisions but required native hunters to obtain licences. A few game sanctuaries and several bird sanctuaries were established under the Ordinance, but these were vastly inferior to the wholesale deletions. In 1922, Wood Buffalo National Park was established astride the northern Alberta and southern NWT border to protect the remaining wood bison in Canada. Two National Park Reserves, Nahanni and Auyuittuq, were established in the NWT in 1972.

Recent Conservation Provisions¹⁴

Much environmental legislation affecting the NWT was passed in the early 1970s. Like the conservation reserve system, this legislation was encouraged by sovereignty issues. It was also a response to exploration for resources and lobbying efforts of southern public and private interest groups. Legislation included the Northern Inland Waters Act (1970), the Arctic Waters Pollution Prevention Act (1970), amendments to the NWT Act and Territorial Lands Act (1970), the Territorial Land Use Regulations (1971 and 1977), the NWT Environmental Protection Ordinance (1973) and the Ocean Dumping Control Act (1974). This legislation is discussed in subsequent chapters.

Various assessment procedures and guidelines were also developed in the early 1970s. These included the 1970 Pipeline Guidelines, the 1972 Expanded Pipeline Guidelines, Guidelines for Scientific Activities in Northern Canada and Guidelines to assist in the application of the Territorial Land Use Regulations. Some government projects are subject to the Environmental Assessment and Review Process which was established in 1973. Environmental assessments may also be required under the Northern Inland Waters Act, the National Energy Board Act, the Fisheries Act and the Territorial Land Use Regulations.

¹⁴ Based on Lucas and Peterson, 1978; Rees, 1978.

Attempts to plan land use were begun in the Mackenzie Delta, the Tuktoyaktuk Peninsula and the Baker Lake Region in the mid-1970s. The committees responsible for these activities were the Mackenzie Development Committee and the Federal-Territorial Regional Planning Committee.

In March 1974, the Mackenzie Valley Pipeline Inquiry was established to assess the impacts of a proposed pipeline and to determine conditions for its construction. Hearings were held under Justice T.L. Berger, who recommended in 1977 that construction of a pipeline in the Mackenzie Valley be postponed for at least ten years.

TRANSPORTATION¹⁵

Historically, the Mackenzie River system has been the primary means of transportation in the NWT. In the 19th century traders traveled the Mackenzie River in York Boats from Methy Portage, along the Slave River, across Great Slave Lake and eventually to the Mackenzie Delta. They had to portage the 26 km (16 mi.) stretch of rapids above present-day Fort Smith. Steamboats later avoided this hazard by collecting cargo transported by rail from Edmonton.

Initially, several firms competed to ship freight cargo along the Mackenzie River system by barge and steamer. In the late 1930s these included the Northern Transportation Company, Hudson Bay Transport and the Mackenzie River Transport Company. In 1944 the Northern Transportation Company became a Crown Corporation and by 1965 it had absorbed all competition.

¹⁵ Based on Berger, 1977; Rea, 1976; M. Marsden, "Transportation in the Canadian North", 1972.

The federal government initiated a program in 1950 to aid navigation through preparation of river charts, a river "Pilot", navigational aids in all channels and dredging at selected sites. The program was accelerated during the 1960s.

Float-equipped aircraft were introduced into the Mackenzie District in 1920-1921. After 1925 they were used routinely throughout the NWT. A Mackenzie Valley air route was designated from Edmonton to Norman Wells for military purposes in World War II. This project involved the construction of airfields at several settlements. While the route was not of great importance during the war, the airfields and facilities have been increasingly used for scheduled and chartered commercial flights.

A crude road, later to become the Mackenzie Highway, was built from Grimshaw, Alberta, to Hay River in 1938/39, again for military purposes. The road was used for hauling supplies to Hay River for subsequent shipping to Yellowknife during the first gold strike. It was upgraded to highway status by the end of World War II.

During the 1950s the federal government aided industry in road building in the NWT. Later in the decade, under its "Roads to Resources" policy, the federal government agreed to cover the entire cost of some roads in order to provide general access and to promote development. Substantial extensions were added to the Mackenzie Highway under this program.

In the early 1960s the Great Slave Lake Railway was built from Grimshaw to Hay River. By 1966 it reached Pine Point to achieve its purposes of shipping out lead-zinc concentrates and providing railway service to the Mackenzie District. Funded by the federal government and Pine Point Mines Limited, it carried as much freight for other purposes as it did for Pine Point by 1970.

MINERAL RESOURCE DEVELOPMENT¹⁶

Provision for the disposal of mineral rights in the NWT came under the 1872 Dominion Lands Act until an 1884 Order-in-Council set out Mining Regulations for minerals other than coal. Although explorers such as Frobisher (1576) and Mackenzie (1789) had shown interest in the mineral potential of the NWT, it was not until the 1920s and 1930s that new technology permitted serious exploration and development.

The most important mining operations of the Mackenzie District were for oil at Norman Wells, radium at Great Bear Lake and gold at Yellowknife.

Claims were first staked in the area of Fort Norman in the Mackenzie Valley in 1914 by Dr. T.O. Bosworth for a Calgary syndicate. In 1919, the three claims were acquired by the Northwest Company, a subsidiary of Imperial Oil Limited. Oil was struck in 1920, and by 1924 three of six wells drilled were found to be producers. A refinery was built in 1924 and then shut down due to the lack of an adequate market. In the early 1930s it was reopened to supply fuel for river boats and machinery related to the mines at Yellowknife and Port Radium (Echo Bay). Two new wells were opened by the end of the decade.

In 1930, Gilbert Labine discovered silver and pitchblende on the east shore of Great Slave Lake. Eldorado Mines Limited began production of Echo Bay in 1933 and by 1939 the concentrate produced was valued at \$7.6 million per annum. Uranium was drawn from this source between 1936 and 1960. Eldorado was made a Crown Corporation during the war. The mine was closed after the uranium boom of the 1950s and subsequently reopened by Echo Bay Mines Limited as a cobalt-silver-copper mine.

¹⁶ Based on Naysmith, 1975; Berger, 1977; Rea, 1976; Scace, 1975; Rees, 1978.

Gold was discovered on the north shore of Yellowknife Bay in 1933 by the Geological Survey of Canada. Three mines were brought into production in 1938/39, and a fourth was added in 1951. The Con, Rycon, Negus and Giant gold-quartz mines continued to produce until 1943, when operations were suspended due to a shortage of labour. Reopened in 1946, these mines became the mainstay of the mineral industry of the Mackenzie District in the 1950s and 1960s.

Occasional work was conducted on the west coast of Hudson Bay and a nickel mine was brought into production in 1957 by North Rankin Inlet Mines Limited. The ore was exhausted, however, by 1961.

Even though extensive exploration of ore bodies was carried out in the 1960s, only two mines were developed. The first was a tungsten mine in the southwest of the Mackenzie District, and the second was a lead-zinc mine at Pine Point. The latter was feasible only through federal support to construct the Great Lake Railway and the Talson River Hydro-electric plant. The mine began production in 1964 and by 1973 Pine Point Mines Limited had taken over most of the other mining firms in the vicinity.

Federal policy developed in the 1950s and 1960s, and more particularly the promulgation in 1961 of the Canada Oil and Gas Regulations provided incentives to the private sector to explore for oil and gas in the north. Petroleum was discovered at Prudhoe Bay, Alaska, in 1968, encouraging increased exploration and drilling in the far north by 1970. Imperial Oil made the first widely publicized petroleum discovery in the NWT at Atkinson Point on the Tuktoyaktuk Peninsula in 1970. During the same year Panarctic struck gas on King Christian Island. Some of the companies active in the north have been Imperial Oil at Atkinson Point; and Taglu in the Mackenzie Delta; Dome in the Beaufort Sea; Elf Petroleum on Banks Island and the Western Islands of the Arctic Archipelago; Shell Oil in the Mackenzie Delta; Panarctic in the Islands of the Arctic Archipelago,

particularly Melville Island; Sun Oil in the Arctic Archipelago and Gulf Oil in the Mackenzie Delta. There were 31 oil and gas discoveries in the NWT by 1973.

OTHER ACTIVITIES

Fisheries¹⁷

Federal biologists who studied Great Slave Lake in 1944 estimated that the lake could support a substantial fishery. The development of a Great Slave Lake fishery was initially undertaken by a private firm already operating on Lake Athabasca. Construction of the Mackenzie Highway in the late 1940s relieved some transportation problems and permitted smaller firms to enter the industry. Both the summer and winter fisheries in the north have largely been operated by itinerants and seasonal workers from the south. The fresh-water fish marketing corporation which was established in 1969 undertook the exclusive right to market NWT fish and also provided financial and technical assistance to process fish. With the help of the GNWT and DIAND it completed its largest project, a plant at Hay River, in 1972.

Agriculture¹⁸

Small farms and gardens were developed in the north, where conditions permitted, by early traders and missionaries. Indians near Great Slave Lake owned horses before 1900. Cattle were introduced to Aklavik by a government doctor who started a dairy herd there in 1949. Fur farming has not been successful, although it has been attempted as far north as Pangnirtung. Other experiments which have failed include efforts to crossbreed a Tibetan yak with cattle, and attempts to gather musk-ox wool from bushes for spinning. Reindeer herding has been successful in the Tuktoyaktuk area and has more recently been established in the Belcher Islands.

¹⁷ Based on Rea, 1976.

¹⁸ Based on Crowe, 1974.

Hydro¹⁹

Most hydro-electric developments in the NWT have been small scale, intended only to meet local demands of communities such as Yellowknife and Fort Smith. Most power needs have been met by oil burning diesel-electric stations. Since 1948 these facilities have been provided by the Northern Canada Power Commission (formerly the NWT Power Company), which was established by an Act of Parliament.

¹⁹ Based on Rea, 1976.

III. NATIVE LAND CLAIMS

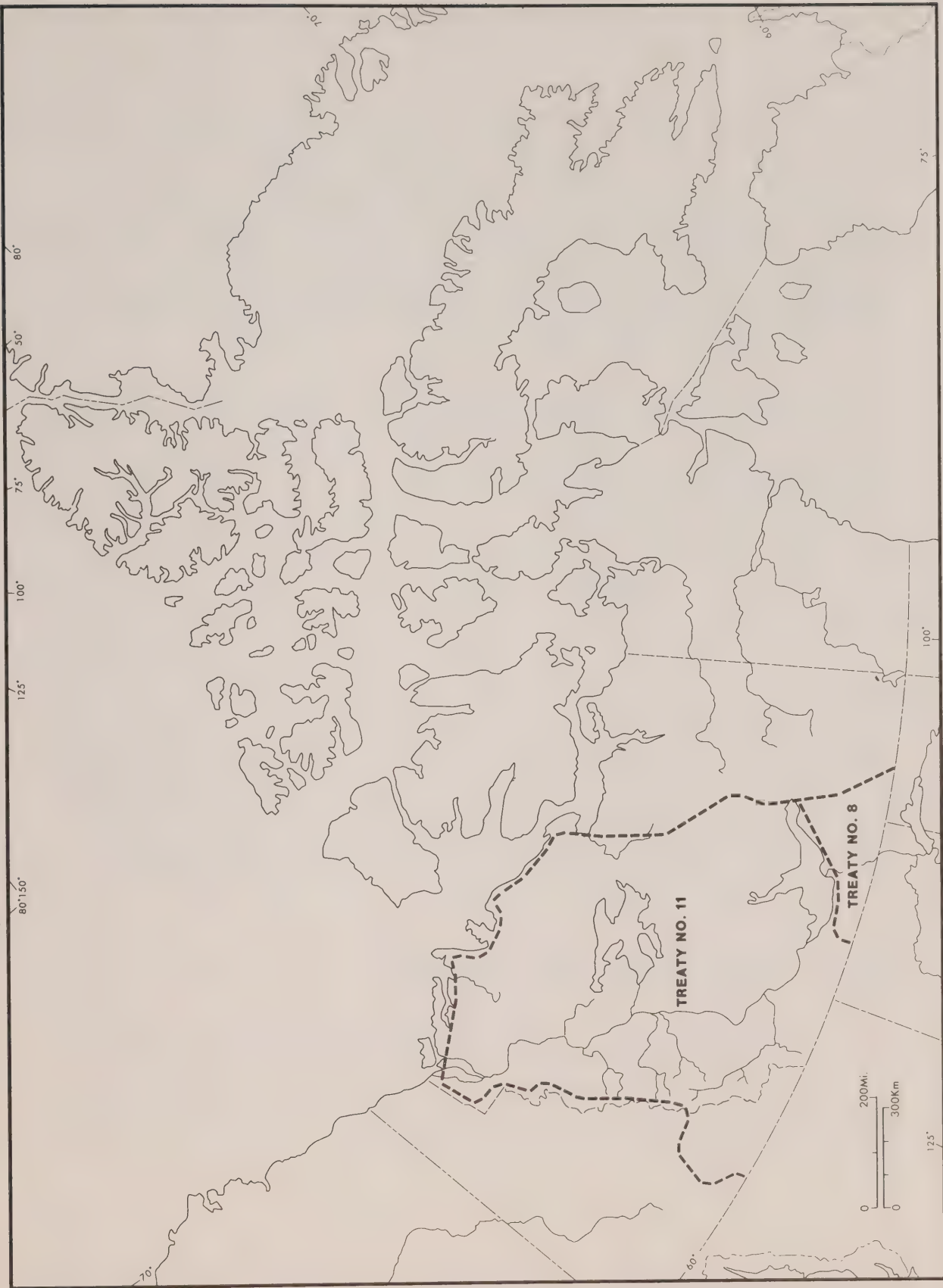
The first part of this chapter describes the legal rights that the native peoples of the NWT have been accorded by various government agencies. The second part outlines the characteristics of the organizations that have been formed to represent the native peoples, and their proposals concerning rights and land claims.

LEGAL RIGHTS¹

The Royal Proclamation of 1763 recognized native rights in declaring that native lands could only be sold to the Crown, thus limiting European settlement and reserving other lands for native use. Treaties 8 and 11 were signed in 1899 and 1921 respectively in response to the Yukon gold rush, the discovery of oil at Norman Wells and general development pressures. The area covered by these treaties in the NWT is shown in Map 4. The Indian tribes included were the Slave, Dogrib, Hare, Loucheux and Chipewyan. These treaties provided for cash payments and the establishment of reserves in return for the surrender of land rights by the Indians. The land entitlements were never taken up, and alternative arrangements recommended by a Royal Commission in 1959 were also unheeded. Other provisions of the treaties included a guarantee of the right to hunt, fish and trap, and the requirement that a chief and councillors be elected every few years.

¹ Based on P.A. Cumming, "Public Lands, Native Land Claims and Land Use", 1973; Rea, 1976; Davidson, 1973; Hunt, 1976; Crowe, 1973; Office of Native Claims, 1978.

Map 4. Indian Treaties in the Northwest Territories



Today the 7,000 "treaty" or "status" Indians in the NWT continue to receive monetary payment each year, although the amount is now very small. The definition of "status Indians" is unclear, but they are generally descendants on the male side of those who signed the original treaties. A federal white paper in 1969 proposed cancellation of the Indian Act and reserves, but Indian leaders rejected it as a threat to their identity and treaty rights.

No treaties have been made with the Metis and 17,000 Inuit of the NWT. After World War II all native peoples began to assert claims based upon aboriginal title to land, however, in 1969 the federal government stated that aboriginal rights would no longer be recognized. Court action by the Nishga Indians of British Columbia in 1973 prompted the government to reverse its position, and in that year DIAND agreed to negotiate claims with the Yukon Native Brotherhood and with non-treaty Indians and Inuit on the basis of their traditional use and occupancy of lands.

The Office of Native Claims (ONC) was established in 1974 to deal with an increasing number of claims submitted to the federal government. The responsibility of this office is to negotiate claims with native groups and associations, while coordinating discussions with other interested agencies and departments. ONC also advises the Minister of DIAND on federal claims policy and appropriate processes for the settlement of claims.

NATIVE ORGANIZATIONS² AND RECENT PROPOSALS³

Four native groups are currently negotiating land claims in the NWT. These are: the Indian Brotherhood of the NWT (IBNWT) which in 1976 was renamed the Dene Nation, the NWT Metis Association (NWTMA), the Inuit Tapirisat of Canada (ITC) and the Committee for Original People's Entitlement (COPE).

² Based on Davidson, 1973; Zariwny, 1977.

³ Based on Hunt, 1978; Office of Native Claims, 1978; Zariwny, 1977.

INDIAN BROTHERHOOD OF THE NWT (SINCE 1969), DENE NATION (SINCE 1976)

This group is affiliated with the National Indian Brotherhood of Canada. It has a membership of 7,000, mainly status or treaty Indians, an elected president, vice-president and a board of directors made up of 16 Chiefs and two sub-chiefs from territorial communities, mostly in the Mackenzie Valley region.⁴ The Dene nation submitted claims to the federal government in July 1975 in the "Dene Declaration" and in October 1976 through a proposal for an "Agreement in Principle". In July 1977 the Metro Proposal was forwarded by the Dene nation. It is suggested in this document that the NWT be divided into three geographical areas where the Dene, Inuit and non-natives each have a majority. Governments with provincial-type powers are suggested for each region.

METIS ASSOCIATION OF THE NWT (SINCE 1972)

This association is run by a president, vice-president and a board of 14 Metis and non-treaty Indians. The Metis and non-treaty Indian population is over half the size of the status and treaty Indian population in the NWT. Its objectives are similar to those of the Dene nation. The Metis Association submitted "Our Land, Our Culture, Our Future" to the federal government in September 1977. It calls for: powers of the GNWT to be decentralized to local authorities, a new Mackenzie Territory, stricter residence requirements for voting and a "Senate of the Mackenzie Corridor". The latter would represent community councils and regulate renewable resource use, protect the environment and control development decisions.

4 Zariwny, 1977, p. 39.

The federal government has encouraged the Dene and Metis to submit a joint land claim. In 1976, however, the Metis refused to support the concept of a separate Dene controlled government in the Mackenzie Valley. Since then, the federal government has attempted to organize joint negotiations between itself, represented by the Office of Native Claims and the Dene and Metis. Lack of success in establishing this dialogue persuaded the federal government to withdraw land claim research funding to those two organizations in September 1978. As of summer 1979, new efforts were being made by the Dene and Metis to develop a joint land claim position.

INUIT TAPIRISAT OF CANADA (SINCE 1971)

This group represents all the Inuit of Canada although non-Inuit are admitted as associate members. A land oriented objective⁵ is to protect the rights of Inuit hunters and trappers in the Canadian north and to promote the formation of a Hunters and Trappers Association in each Inuit community. ITC submitted its first proposal, Nunavut, in February 1976, but this was subsequently withdrawn. In December 1977 it submitted a new claim or proposal for an "Agreement-in-Principle". One of its 11 principles is "the right of the Inuit to own their traditional lands and waters, including the sub-surface."⁶ ITC also asks for jurisdiction over its own territory and an independent government within Canadian Confederation. The basic premise of the ITC agreement is "the right to self-determination".⁷

COMMITTEE FOR ORIGINAL PEOPLE'S ENTITLEMENT (SINCE 1969)

This group was one of the earliest native organizations formed in the NWT and represents the Inuit of the western Arctic. Its goals include "the preservation of Inuvialuit cultural identity, equal participation

⁵ Davidson, 1973, p. 21.

⁶ Hunt, 1978, p. 31.

⁷ Office of Native Claims, 1978, p. 289.

for the Inuvialuit in a changing north, compensation for the extinguishment of land rights and environmental protection".⁸

In May 1977, COPE put forward "Inuvialuit Nunangat" and in 1978 it revised its claims in "Inuvialuit". Considerable progress has been made on the COPE claims, especially in the areas of game and wildlife management.

An "Inuvialuit Land Rights Settlement Agreement in Principle" between COPE and the federal government was signed in October 1978. Both parties agreed to negotiate a final settlement within one year which would then be subject to legislative approval by Parliament. It is hoped that such approval will be in force by December 31, 1980. The principles upon which the agreement is based are as follows:

- to preserve Inuvialuit cultural identity and values within a changing northern society;
- to enable Inuvialuit to be equal and meaningful participants in the northern and national economy and society;
- to provide specific rights, benefits, and compensation to the Inuvialuit in exchange for any Inuvialuit land rights that now exist; and
- to protect and preserve the Arctic wildlife environment, and biological productivity.

The agreement specifies the granting of fee simple title to 12 949 km² (5,000 mi.²) of land including subsurface rights, and 82 875 km² (32,000 mi.²) of land excluding subsurface rights. The Inuvialuit criteria for the selection of lands, rights of access and management responsibility are described in some detail in the document. Federal environmental legislation is to remain in force on Inuvialuit lands.

⁸ Hunt, 1978, p. 27.

COPE submitted its land selection proposals on March 16, 1979, and on May 18, 1979, agreement was reached regarding about 85% of the land to be owned by the Inuvialuit. Land to be transferred to the Inuvialuit is concentrated on Banks Island, Victoria Island and the northern part of the mainland bordering on the Amundsend Gulf. Settlement legislation is to establish a Land Use Planning Commission and a Land Use Applications and Review Committee for the Western Arctic Region and to include any necessary amendments to the Territorial Lands Act and other legislation. The Land Use Planning Commission is to advise the Minister of DIAND and its duties will include the following:

- preparation of a land use plan with the objective of integrating renewable resource management;
- responsibility for on-going land use and coastal planning in the Western Arctic Region;
- assessment of large-scale and long-term activities or proposed activities affecting the land base with respect to environmental, social and economic concerns, including the conduct of public hearings at the community and regional level;
- evaluation of the effectiveness of the legislation and administration affecting renewable resources in the Western Arctic Region, and advising on remedial measures; and
- undertaking, at the request of the Minister, various land management projects, for example, resource inventory and identification of critical habitat.

The Land Use Applications and Review Committee is to be technically oriented and complementary to the Land Use Planning Commission. The committee is to have representatives from the GNWT, the federal government, the Inuvialuit and the Land Use Planning Commission. The responsibilities of the committee are to include the following:

- to advise appropriate government officials generally on the administration of the Territorial Land Use Regulations;
- to advise the Administrator of the Territorial Land Use Regulations on the terms and conditions for specific land use permits with respect to land use, environmental concerns, remedial measures and restoration; and
- to develop systems and procedures for administering environmental controls.

The Inuvialuit and the federal government recognize the importance of the 17 ecological sites in the Western Arctic that were proposed by the Canadian Committee on the International Biological Program. It has been agreed that these sites will be protected and further assessed, and that a management regime for each of the sites will be established.

Impending settlement of native claims has great implications for land use and land use administration in the NWT. Governmental agencies may soon have to adapt to rather different land management policies and priorities. Particularly interesting is the possible establishment of new institutional arrangements to control land use.

IV. ADMINISTRATION AND MANAGEMENT OF LAND AND LAND USE¹

Chapter IV outlines the mandated responsibilities of the federal and territorial governments in relation to land use in the NWT. It illustrates the agencies involved and the administrative procedures that are used to regulate land use. Figure 2 details the organization of DIAND, the major governmental agency involved in regulating and controlling land use in the NWT. Table 4 provides land tenure data.

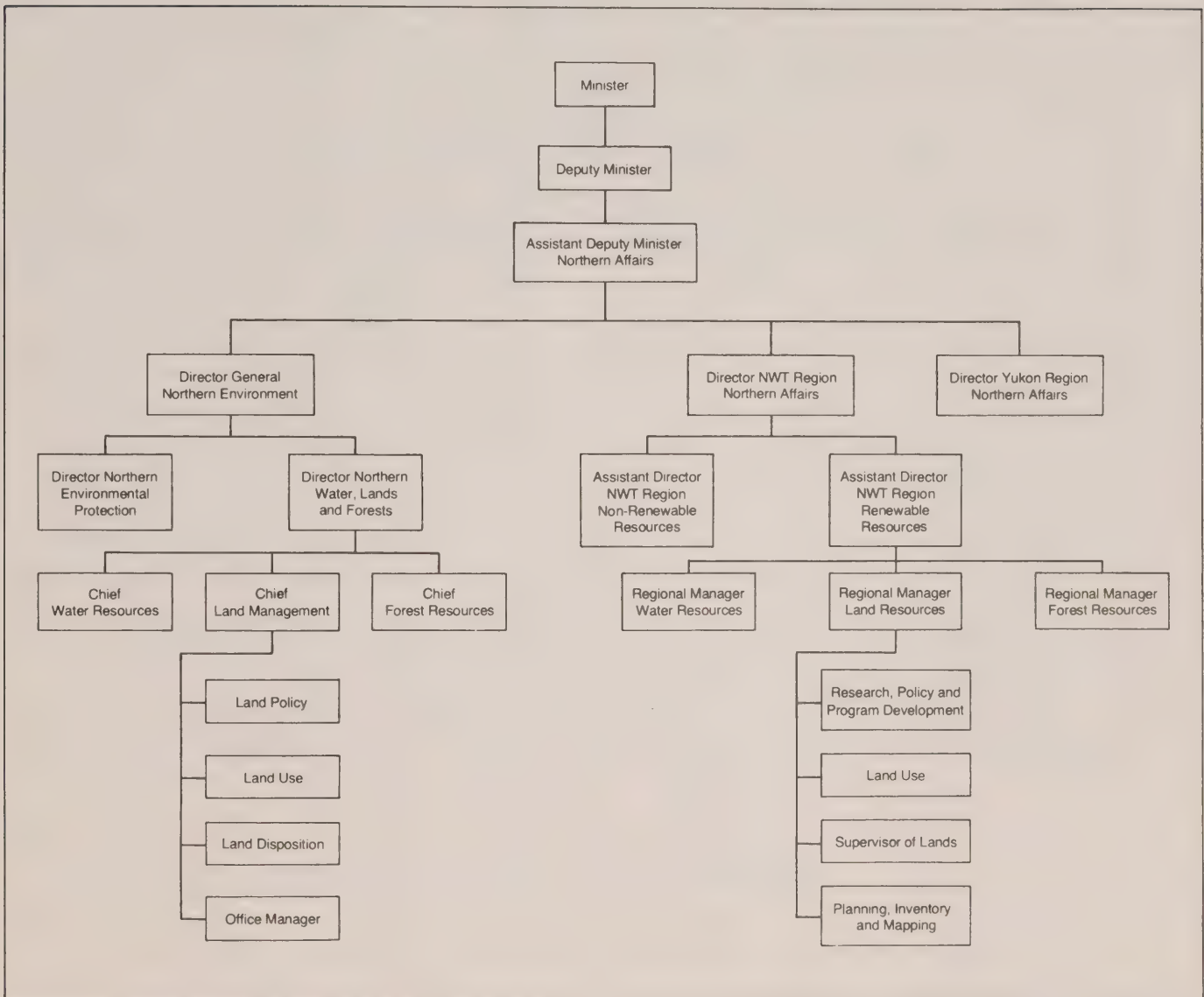
GENERAL CLASSIFICATIONS OF LAND ADMINISTERED BY FEDERAL AND TERRITORIAL AUTHORITIES

- "Commissioner's Lands": Lands whose surface rights have been transferred to the control and ownership of the GNWT. At present, Commissioner's Lands account for 2 947.1 km² (1,149.4 mi.²) of the NWT, and contain sixteen community areas. The creation of Commissioner's Lands involves the transfer of previously designated federal Crown land, and is accomplished by an Order-in-Council pursuant to the Northwest Territories Act.
- "Development Control Zones": Lands under the administrative control of the GNWT, but in the strictest sense, still owned by the federal Crown. Accordingly, until full transfer to the territorial government occurs, the Development Control Zones are legally under federal control. The federal Crown formally issues lease and sale agreements upon the recommendations of the territorial Department of Local Government. The decision-making power, hence the administrative authority, rests with the territorial government. In reality, therefore, the Commissioner has the power to initiate lease or sale agreements for Crown land in Development Control Zones.

¹ Main sources are Beauchamp, 1976, pp. 11-49; DIAND, Procedures, Licencing, Legislation and All That, 1977; DIAND, "Land Administration Manual", 1978 and Naysmith, 1975.

FIGURE 2

DIAND Organization for Land Use Management



Sources: DIAND Organization Chart, December 15, 1977 and DIAND, Land Administration Manual (January 1978), Appendix A to Part I, updated to April 1979

Note: This Figure indicates the organization of DIAND only with respect to those components most directly related to land management. There is, for example, a further organizational breakdown under water resources which is not shown.

- "Federal Crown Land": The vast majority of land in the NWT is owned outright by the Federal Crown, and is administered by DIAND. Other federal departments with holdings in the Northwest Territories such as PWC or NHW, are not legally bound to DIAND land administration policy.

TABLE 4
Land Tenure in the NWT

| | km ² | mi. ² | Hectares (10 ³) | Acres (10 ³) | % |
|---|-----------------|------------------|--------------------------------|-----------------------------|------|
| Privately Owned Land | 31.9 | 12.44 | 3.2 | 7.9 | - |
| Federal Crown Land Excluding National Parks and Indian Reserves | 3 333 965 | 1,287,251 | 333 396 | 823,840 | 98.7 |
| National Parks | 42 603 | 16,450 | 4 360 | 10,528 | 1.3 |
| Indian Reserves | 135 | 52 | 13.5 | 33.3 | - |
| Commissioner's Lands | 2 947.1 | 1,149.4 | 294.7 | 735.6 | 0.1 |
| TOTAL | 3 379 683 | 1,304,903 | 337 968 | 835,137 | 100 |

Source:

Statistics Canada, Canada Year Book 1976-77.

LEGISLATIVE BASE

The administration and management of land and land use in the NWT cannot be separated from the strong legislative base that underlies it. In this regard, land and land use administration is significantly different between the southern provinces and the territories. The settlement of southern Canada took place under the legislative umbrella of the Dominion Lands Act, with its emphasis on homesteading and railway land grants. With the advent of provincial status, land management functions previously performed by the federal government have been given to provincial, and subsequently, to municipal administration.

In the north, the evolution of land management has followed a different course. Due to the harsh climate and resource base, the federal government decided in 1950 that uncontrolled settlement encouraged by the Dominion Lands Act, was inappropriate for the north. Consequently, the Territorial Lands Act was passed in June 1950, to replace the Dominion Lands Act. This new legislation provided the framework for the disposition of surface and subsurface rights to Crown land north of 60°. With the Territorial Lands Act as the cornerstone, land administration practices in the north have been continually refined by federal Acts and Regulations, as well as by Cabinet directives. Since the federal Crown retains ownership of 99% of the NWT land base, land administration and management continues to be predominantly a federal concern.

FEDERAL LAND ADMINISTRATION VERSUS LAND USE MANAGEMENT

A clear distinction exists, in federal lands policy, between land use management and land administration. Land administration is thought of as the framework for the disposition of Crown lands for developmental purposes. Hence, the sale and lease for permanent occupation of Crown lands is a land administration function. The land administration policy has its origins in the Territorial Lands Act. The concept of land use

management, on the other hand, for the temporary use of Crown Lands finds expression in the more recently promulgated Territorial Land Use Regulations (1971). Land use management is principally concerned with mitigating environmental damage which may accompany development on Crown lands.

FEDERAL LAND USE MANAGEMENT

As mentioned earlier, the framework for federal land use control in the NWT rests with the Territorial Land Use Regulations which were initially promulgated in 1971 and were amended in 1977. They establish a licencing procedure for land use operations which are likely to have environmental impacts. The land uses which the Regulations specifically control are as follows: the use of heavy vehicles, the establishment of transitory camps, the extensive use of explosives, the construction of significant fuel caches, and the use of vehicles and machines for the clearing of lines, trails, and rights-of-way (see Appendix A). Hence the permit system is designed to regulate land use activities which explore for natural resources. The Regulations apply solely to unalienated federal Crown land, and do not apply to territorial residents' activities in the fields of hunting, fishing or trapping. Prospecting activities, save for the use of heavy vehicles and equipment, are also exempted from the Regulations.

THE LAND USE PERMIT PROCEDURE

Land Use Permits do not grant any rights to the surface of land, but merely set environmental protection conditions under which the land may be used. Land Use Permits normally apply to short-term use of Crown lands, but may be extended for up to one year beyond the two year maximum term specified in the Regulations. Pursuant to the 1977 Regulations amendment, land use operations fall into either "A" or "B" permit types. Class "A" permits are distinguished from Class "B" permits by the degree of environmental disturbance likely to result

from a given activity. Hence, stricter conditions are usually attached to Class "A" permits. The difference in permit types, by land use activity, can be seen in Table 5. The steps followed to obtain either an "A" or "B" land use permit are illustrated in simplified form in Figure 3.

Procedure for a Class "A" Permit

1. Applications for land use permits are submitted to the "Engineer" (S.22, Territorial Land Use Regulations). The "Engineer" is, in fact, Regional Manager of Lands Resources, Northern Affairs Branch, situated in Yellowknife. Upon receipt, the application is passed to the "Land Administrator" within the Land Resources Section. The Land Administrator ensures that the application is complete and ready for evaluation. A "complete" application includes the application fee (\$20.00 for a Class "A" permit), as well as maps and plans identifying proposed land use operations.
2. Within ten days of receiving the application, the Land Administrator must either accept it for further examination, or reject it as incomplete. If the application is deemed to be complete, the Land Administrator classifies it as either a Class "A" or Class "B" land use proposal.
3. If a Class "A" permit is required, copies of the application and all relevant materials are forwarded to each member of the Land Use Advisory Committee, (this Committee's composition and role is discussed later), and the DIAND Land Use Office in Ottawa, the Dene Nation and/or Inuit Tapirisat, and the district office of DIAND closest to the areas affected by the proposed operation. The district office then circulates a copy of the proposed operation to concerned community councils for their comments.
4. Each of the groups which has been consulted in Step 3 submits its recommendations about the proposed operation to the Land Administrator. Recommendations may concern environmental and other conditions to be attached to the permit.
5. The Land Use Advisory Committee reviews the recommendations, and suggests the conditions to be attached to the permit if one is to be issued.
6. Acting upon the advice of the Committee, the office of the Engineer may issue an "A" permit for a period not exceeding two years, subject to specific operating conditions. If the application is rejected at this stage, a statement of reasons must accompany the rejection notice. Another alternative open to the Engineer is the postponement of a decision until a detailed land inspection is carried out.

TABLE 5
Land Use Activities Requiring Permit, by Type

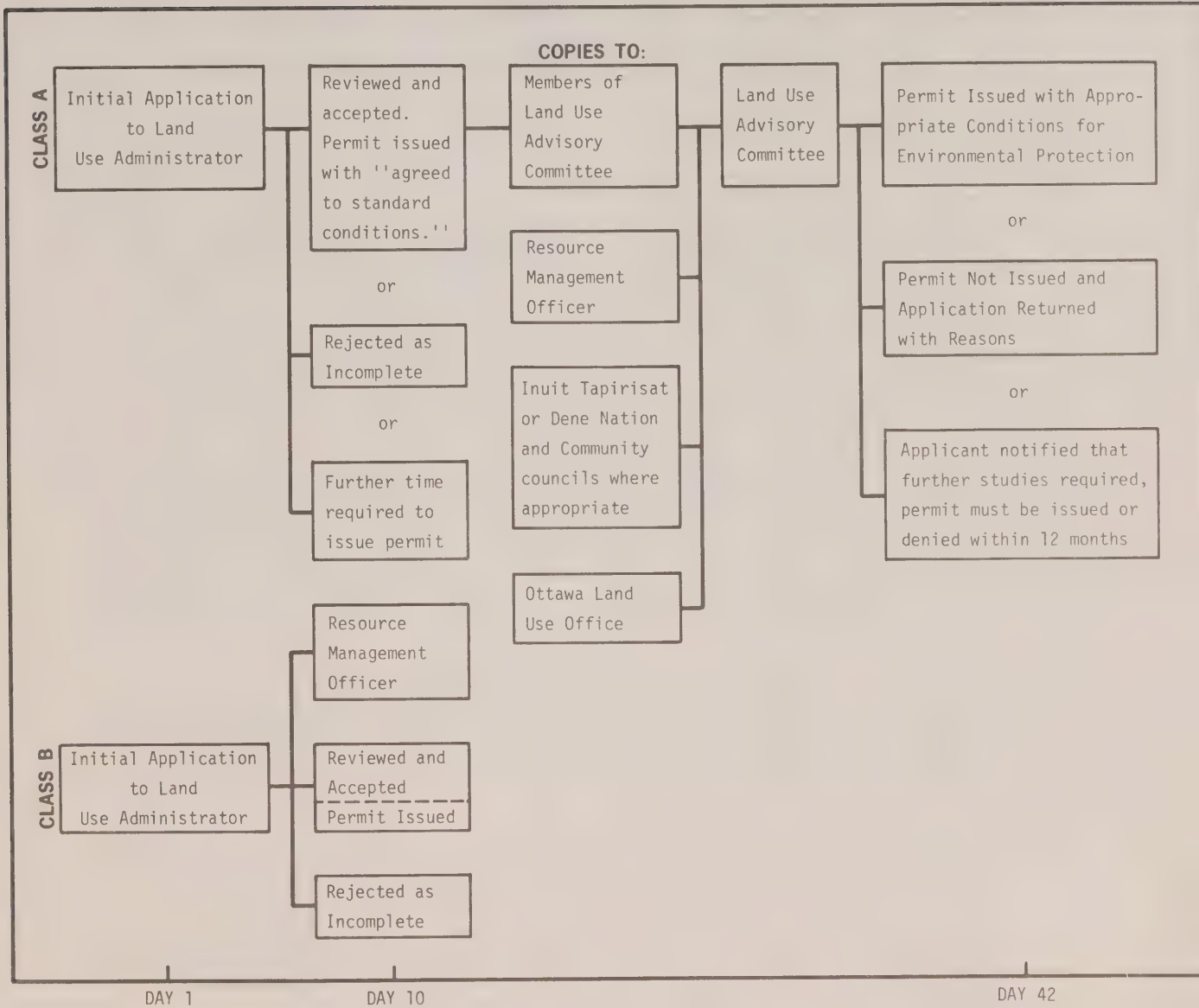
| Activity | Class "A" Permit | Class "B" Permit |
|--|---|--|
| Explosives | More than 150 kg (330.7 lb.) in any 30-day period. | More than 50 kg (110.2 lb.) but less than 150 kg (330.7 lb.) in any 30-day period. |
| Use of Vehicles | Any vehicle exceeding 10 t (22,046 lb.) net weight. | Any vehicle of 5 t to 10 t (11,023 lb. to 22,046 lb.) net weight or exerting a pressure of more than 35 kPa (5.076 lb./in. ²). |
| Drilling | Equipment with an operating weight of more than 2.5 t (5,511.5 lb.), not including drill rods, bits, pumps, etc. | Equipment weighing 500 kg to 2 500 kg (1,102.3 lb. to 5,511.5 lb.) excluding drill rods, etc. |
| Campsites | In use for more than 400 man-days. | In use for 100-400 man-days by more than two people. |
| Fuel Caches | Any cache of more than 80 000 L (17,598 imperial gal.), or any single container with more than 4 000 L (880 imperial gal.). | Any cache of 4,000 L (800 imperial gal.) to 80,000 L (17,598 imperial gal.), or any single container of 2 000-4 000 L (440-880 imperial gal.). |
| Earth Moving and clearing; hydraulic prospecting | Use of any self-propelled or stationary machinery. | |
| Preparation of lines, trails, rights-of-way | Line, trail or right-of-way more than 1.5 m (4.9 ft.) wide and 4 ha (9.9 a.) in area. | Line, trail or right-of-way more than 1.5 m (4.9 ft.) wide, but less than 4 ha (9.9 a.) in area. |

Source:

DIAND, Procedures, Licensing, Legislation and All That, p. 7 and Territorial Land Use Regulations, SOR/77-210.

FIGURE 3

Land Use Permit Flow Chart



Source: DIAND, Procedures, Licensing, Legislation and All That, p. 9.

After the issuance of a land use permit, a continuous monitoring process occurs to ensure that the conditions specified in the permit are being complied with. After the land use is completed, and the permit has expired, land use inspections are carried out to ensure that the site has been properly restored. The Engineer may request a security deposit of up to \$100,000 from the permittee, thereby encouraging his compliance with stated permit conditions.

Procedure for a Class "B" Permit

1. Initial application for a land use permit is made to the "Engineer" in Yellowknife. As was the case for "A" permits, the Land Administrator within the Land Resources Section of DIAND's Northern Affairs Branch has the option of accepting the application, or rejecting it due to its incompleteness. An acceptable application is one which includes the appropriate application fee (\$10.00 for a Class "B" permit), in addition to maps and plans identifying proposed land use operations.
2. Within three days of receiving the application, the Land Administrator must either accept it for further examination, or reject it as incomplete. If the application is deemed to be complete, and falls within the "B" land use operations parameters, the Land Administrator classifies it as a "B" land use permit proposal and the Engineer must issue the permit within ten days or give reason for its rejection.
3. Whereas "A" permits must be reviewed by several bodies, "B" permits are simply issued by the Engineer upon the recommendations of the Land Administrator. Conditions that are attached to "B" permits are formulated by the Land Resources Section without formal external consultation.
4. If a "B" permit is issued by the "Engineer", monitoring of the ongoing land use operation continues throughout the two year permit period. Inspections are carried out, in a manner identical for "A" permits, to ensure that restorative measures are undertaken following the cessation of the land use operation. As a precautionary measure, the "Engineer" may also request a security deposit of \$100,000 (maximum) for a "B" permit. Hence, compliance measures for "A" and "B" permits are potentially similar. Generally, however, security deposits are larger for "A" type land use permits.

General Permit Conditions

The land use permit procedure imposes obligations for both the Crown and the permittee. The Crown must, for example, evaluate a proposal within a specified time framework. Unless the Engineer informs the applicant that additional land inspection is necessary, a decision concerning the permit proposal must be made within ten days of the initial application. Where additional information is needed, the Engineer can delay issuance of a permit for 42 days or 12 months, as required. In the case where a land use proposal is rejected, the Crown must also supply the reasons for its judgement.

The permittee is subjected to a comprehensive list of permit conditions. The permit may include terms and conditions relating to the location and area of lands that may be used; timing of operations; type and size of equipment that can be used in the land use operation; the type, location, capacity and operation of all facilities to be used; the methods to be followed for erosion and flood prevention; the handling of toxic material; the protection of wildlife and fisheries habitat; the protection of places of ecological, archeological, recreational or scenic value; methods for brush disposal; and other matters not inconsistent with the Regulations that the Engineer feels are necessary for the protection of biological or physical properties of Land Management Zones. The permittee's responsibilities are included in Sections 10-19 and 32-45 of the Territorial Land Use Regulations (see Appendix A).

Enforcement of Permit Conditions

Permit enforcement is the responsibility of "land use inspectors" appointed by DIAND. Land use inspectors are situated throughout the NWT and report to the Chief Inspector of Land Use in Yellowknife. Up to the present, Resource Management Officers (RMOs) in the Northern Affairs Branch area offices have been assigned the added duties of land

use inspectors. Some RMOs are both "water inspectors" and "land use inspectors". Others have the designated "land use inspector" role in addition to their forestry officer duties. In the NWT, natives have also been appointed as "special land use inspectors" to assist in inspections of operations near native communities. Hence, the land use inspector group consists of professionals and non-professionals with different training and background. The diversity of background is often a benefit, rather than a hinderance. Timber operations for example, are overseen by the land use inspector who doubles as the forestry officer. He is thus able to oversee all phases of the timber operation from harvesting to processing. In the case of exploratory operations for oil and gas, the land use inspectors must monitor the permit conditions for access routes, location, fuel storage and garbage disposal. In this situation, the land use inspector works closely with the Oil and Gas Conservation Engineer who monitors engineering and safety at the drill site.

The legal powers of the land use inspectors are defined in Sections 38 to 41 of the Territorial Land Use Regulations. An inspector has the right of entry to any premise on Crown land, save a private dwelling, for the purposes of permit inspection. If he finds a lack of compliance with the conditions of a permit, he is compelled to inform the permittee of his default. If the default continues after a period specified for rectification, the inspector has the power to suspend the land use operation. During this suspension period, the permittee must correct the default. If he fails to do so, the Engineer may cancel the permit. The permittee may appeal to the Minister of DIAND for a reversal of the Engineer's cancellation order. The appeal must be launched, however, within 30 days of the Engineer's order of cancellation.

THE LAND USE ADVISORY COMMITTEE (LUAC)

As was mentioned earlier in the discussion of the Class "A" permit procedure, the LUAC plays an important advisory role. Its foremost

responsibility is the provision of expert advice to the "Engineer" on the environmental and operating conditions deemed appropriate for a particular "A" land use permit. Accordingly, the Committee may, in a review of a permit proposal, undertake additional environmental assessments before submitting recommendations to the Engineer or advise that additional time is required to adequately assess environmental implications.

The composition of the LUAC is multi-disciplinary. Permanent representatives of the Committee include DIAND, Department of the Environment, Department of Fisheries and Oceans and the GNWT Departments of Local Government and Natural and Cultural Affairs. DIAND representation on the Committee is selected from the department's Land Resource Section, Water Management Section, Oil and Gas Section, and Mining Section. The Department of the Environment is represented by members from the Canadian Wildlife Service and the Environmental Protection Service. The Department of Fisheries and Oceans is represented by the Fisheries and Marine Service Branch. The Assistant Director for Renewable Resources, DIAND (NWT region) is the Committee Chairman. In certain instances, representatives from Parks Canada and other government departments are invited to participate in the Committee meetings. The Committee, may therefore, draw upon a wide range of expertise while deliberating upon an application.

The LUAC usually convenes in Yellowknife twice a month to review land use permit applications. The Engineer has the authority to issue "B" permits and uncomplicated "A" permits without input from the Committee. Hence, the Committee's advisory role is limited to unusual land use operations, where environmental damage is potentially quite serious. Before the Engineer issues an ordinary type "A" permit, he must solicit opinion from interested departments. If the consulted departments believe the land use operation to be non-routine, the application is sent to the LUAC for review. Routine Class "A" permits are issued within ten days of application, and are summarized in a monthly report listing types of operation,

location, and general conditions attached, etc. The non-routine "A" permits are ultimately issued or rejected by the Engineer after the Advisory Committee has concluded its review of the application. The permit, in this case, is usually issued within 42 days of application. The LUAC may, however, undertake additional environmental assessments which will delay the approval date.

LAND USE PERMITS ISSUED, BY OPERATION TYPE

Of the land use permits issued to December 1978 in the NWT, the vast majority have been for mining exploration and drilling. Over 76 active permits are operative for this purpose. As of June 1978, Crown land under exploration and drilling permit in the NWT amounted to 169 303 ha (418,178 a.).² The permit area of all other land use operations combined totalled only 11 101 ha (27,419 a.). The relative demands for certain types of land use operations is illustrated in Table 6. In 1978, for example, no new permits were issued in the NWT for timber operations, gas gathering systems, pipelines, railroads or hydro projects. Demand was significant for new quarrying operations and government projects. Of the 287 active land use permits presently authorized, 189, or 66% are new permits issued in the 1978 calendar year.

FEDERAL LAND ADMINISTRATION

In addition to its role in Crown land use management, the federal government is actively involved in land administration, that is, land "disposal". Subject to Section 4 of the Territorial Lands Act (RSC, 1970), the Minister of DIAND has the responsibility of disposing of both surface and subsurface rights to Crown land in the NWT. "Disposal" of Crown lands can take one of two forms: outright sale of surface rights,

² Land Management Division, Northern Environment Directorate, DIAND.

TABLE 6
Land Use Permits, by Operation Type

| Operation | Permits Issued in 1978 | Active Land Use Permits as of Dec. 1978 |
|------------------------------------|------------------------------|--|
| Oil and Gas Drilling | 10 | 29 |
| Seismic | 8 | 5 |
| Mining Drilling and Exploration | 68 | 76 |
| Mining (Geophysical) | 1 | 5 |
| Roads (Public construction) | 8 | 15 |
| Roads (Private construction) | 11 | 14 |
| Airstrips | 2 | 4 |
| Government Projects | 24 | 29 |
| Powerlines | 1 | 1 |
| Campsites Staging Areas | 14 | 35 |
| Hydro Projects | - | 1 |
| Communication Sites | 4 | 6 |
| Railroads | - | - |
| Research Projects | 10 | 13 |
| Pipelines | - | 2 |
| Quarrying | 23 | 44 |
| Gas Gathering Systems | - | 1 |
| Timber Operations | - | 2 |
| Miscellaneous | 5 | 5 |
| TOTAL | 189 | 287 |

Source:

Records, Land Use Section DIAND, Yellowknife.

or lease of surface and/or subsurface rights. The Territorial Lands Regulations (1960) outline the procedure for general Crown land disposal. Other Regulations made pursuant to the Territorial Lands Act, such as the Oil and Gas Regulations and Quarrying, Coal and Timber Regulations, clearly establish federal disposal policy for specific activities. In all disposal agreements, the sale or lease of Crown land

in the NWT does not include fishing, mineral or water rights (S. 9-12, Territorial Lands Act). Similarly, a 100-foot wide strip of shoreline along navigable rivers is reserved for the Crown. Furthermore, the Governor-in-Council has the authority to withdraw Crown land from disposal, if such an action is deemed to be in the "public interest". Land is most frequently reserved for public works, such as hospitals and schools, conservation of naturally significant areas or in connection with native land claims. In all cases, the disposal of Crown land must take into consideration the broader goals of the Northern Policy, issued in 1972 (see Appendix B). Social, economic and environmental objectives must be realized in a multiple land use strategy. Accordingly, land disposition is approved for legitimate applications which appear likely to benefit NWT residents at large, as well as the individual proponent.

DISPOSAL OF SURFACE CROWN RIGHTS

The Land Management Division of DIAND's Northern Environment Branch is the group specifically authorized to dispose of surface rights to Crown land in the north. The group's functions include:

- the disposition of land for the needs of the general public;
- disposition to other federal departments or agencies, either through an Order-in-Council for long-term use, or by reservation for shorter-term use;
- the transfer of land to the territorial government; and
- general land use planning.

The Land Management Division's functions are divided between the regional office in Yellowknife and headquarters in Ottawa. In Ottawa, the functions are primarily of a research, coordination and policy development nature. For example, headquarters examines the over-riding

policy issues affecting land dispositions, such as the feasibility of northern lands for agriculture, and native land claims. The Ottawa Land Management Section also develops long-range plans to integrate federal and territorial land administration programs. The regional office in Yellowknife, in contrast, is operations-oriented, and is directly involved in the disposal process.³

APPLICATION FOR SURFACE RIGHTS, BY LEASE OR PURCHASE

The procedure for acquiring federal Crown lands is outlined in the Territorial Lands Regulations. The Regional Manager of Lands receives all surface rights applications, administers leases and grants and maintains a register of all Crown lands which have been disposed of. The Regional Manager of Lands is an employee of the Northern Affairs Program in Yellowknife, and reports to the Assistant Regional Director of the Renewable Resources Division. Although most land applications are forwarded directly to the Regional Manager of Lands in Yellowknife, applications are also accepted at the Northern Program's district offices in Inuvik, Fort Smith, Fort Simpson, Frobisher Bay and Rankin Inlet. Initial application may also be made at mining recorders' offices. Land agents at these localities check the submitted applications, and forward them to the Regional Manager of Lands for his consideration. The main steps DIAND follows in processing the bulk of land tenure agreements is illustrated in Figure 4 and summarized below.

1. The application for federal Crown land arrives at the office of the Regional Manager of Lands, DIAND, Yellowknife. Both private concerns and government agencies must submit a formal application, either by mail or in person.
2. The Regional Manager and his staff conduct a preliminary review of the application, including an inspection of the land, if required. In this initial review, an application may (a) meet government requirements and pass to the next stage of approval, (b) be rejected outright for lack of conformity with government policy, or (c) be returned to the applicant for amendment and resubmission.

³ DIAND, "Land Administration Manual", 1978, S. 201, 202.

3. Where the application meets government requirements, it is forwarded to the Federal-Territorial Lands Advisory Committee for review and clearance by concerned departments of both governments (Where the application conforms to a special use as designated in an agreement between the two governments, i.e. cottage lot subdivisions, this review by the Committee is eliminated).
4. The Committee forwards the application with its recommendations to the Director, NWT Region, of the Department of Indian Affairs and Northern Development.
5. The Regional Director can approve the agreement, approve it subject to modification by the applicant, reject it, or reserve a final decision until additional information is supplied.

GENERAL LAND DISPOSITION POLICY

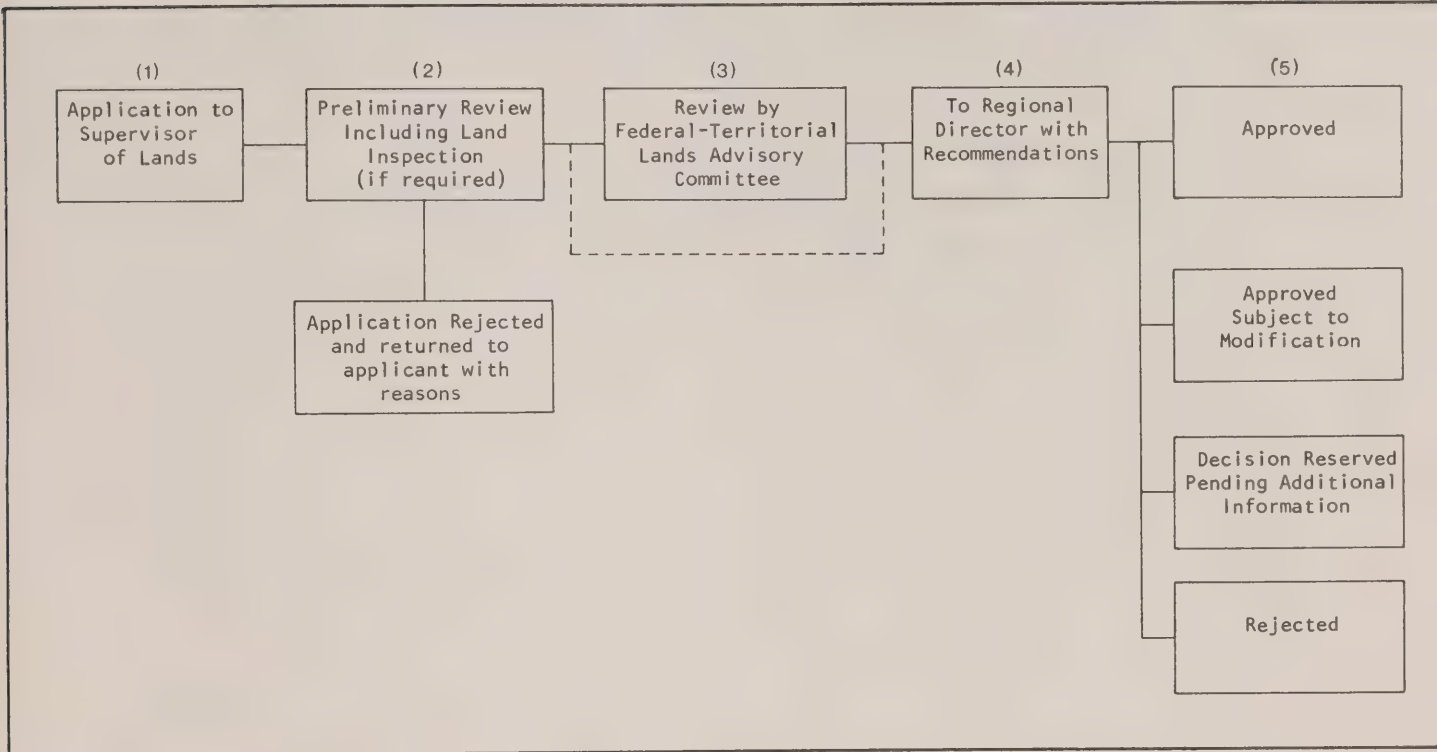
Since the primary concern of Crown land disposition is the orderly development of the NWT, and the protection of the public interest, several guiding principles have been formulated for effective land management. Foremost is the principle of "reasonable need". The Land Disposal Section is given the duty of allocating land to satisfy the reasonable needs of the applicants. Consequently, urban sprawl and land speculation are expressly discouraged. Furthermore, the Agency seeks to protect the public interest through leasing agreements, rather than outright sale. Since comprehensive plans specifying the most appropriate uses are absent for most of the NWT, present policy is to make land available on a lease-only basis.⁴ The terms of the lease range from three to 30 years, depending upon location and intended use. The terms of leases issued by the Crown insist upon the following conditions:

- that the lessee use the land for the purposes indicated on the application;
- that the lessee complete the agreed upon "improvements of the land" as specified within a given time framework;

⁴ DIAND, "Land Administration Manual", 1978, S. 303.5

FIGURE 4

Land Tenure Agreement (Lease) of Federal Crown Land



Source: DIAND, Procedures, Licensing, Legislation and All That, p. 15.

Note: The numbers in brackets correspond to paragraph numbers on the preceding page.

- that federal rental charges and levied territorial taxes be paid faithfully; and
- that land is kept in a satisfactory condition.

LAND DISPOSITION POLICY BY SPECIFIC LAND USE

Federal policy toward land disposition varies with the type of land use being considered. Disposition is increasingly cautious due to ongoing native land claim negotiations. The following sections will outline federal leasing policy for residential, cottaging, commercial and agricultural land uses.

RESIDENTIAL

Most residential leases are sought in areas designated as Commissioner's Land, and are therefore the responsibility of the GNWT. Since the GNWT also has the power of zoning in Development Control Zones, federal involvement in leasing residential uses is marginal. The federal role in residential leasing is restricted, for the most part, to underdeveloped Crown lands. Generally speaking, leases are restricted to a lot size of 0.36 ha (0.92 a.). In 1978, the federal government issued 51 residential leases, the majority of which were located in the Development Control Zones.

COTTAGING

The federal government is currently leasing cottage lots within designated subdivisions. The GNWT is consulted in the selection of cottage subdivisions, as well as the density plans for each subdivision. Ever increasing demand for cottage lots is causing pressures around the larger urban centres. Development by subdivision is intended to prevent haphazard growth, reduce land speculation, conserve prime waterfront land and improve administrative services to the cottage lot applicant.

Lots are leased for an initial three-year term followed by a 27-year renewal. During the first three years, the lessee must comply with all specified conditions agreed upon in the lease, or suffer forfeiture. A major obligation attached to all cottage leases requires commencement of cottage construction within one year, and completion by the end of the lease's second year.

Only one underdeveloped lot may be acquired by a person or a family unit. Lease rental fees depend upon lot size, location and services provided. Subdivision lots are accessible by road or water, and have been legally surveyed. Review of the lease, in terms of rental rates, may occur at five year intervals. Prior to the implementation of the "leasing only" cottage policy, cottagers were given the option to purchase after an initial waiting period. The federal government is committed to honouring these early "buy option" leases. In 1978, 48 recreational leases were issued for the NWT by the federal Crown.

COMMERCIAL COTTAGES AND LODGES

Before applying for a commercial cottage lease, the applicant must first receive a GNWT business licence. The lease will usually be granted, providing the general lease rules are met, and the extended use does not conflict with surrounding uses. The proposed cottage must be set back 30.48 m (100 ft.) from the Ordinary Highwater Mark.

Federal leasing approval of tourist fishing lodges is contingent upon the issuance of an operations licence by the GNWT Department of Tourism. If general leasing criteria are met, a commercial lease will follow. Federal policy presently restricts water frontage of a commercial lodge operation to 180 m (600 ft.).

THE AGRICULTURAL LAND DISPOSITION POLICY

Following the January 10, 1975 announcement by the Minister of DIAND, disposition of large tracts of Crown land for agriculture has been halted in the NWT. Land disposition is, therefore, temporarily suspended for the purposes of mixed farming, dairy farming and livestock operations. The reasons given for the suspension are as follows: (a) to stop the spread of agriculture to non-productive land or onto land that might be better used or reserved for other purposes; (b) to enable the federal and territorial governments to jointly develop long-term disposal policies; (c) to identify areas of best agricultural suitability in accordance with federal and territorial land use plans; and (d) to allow the necessary time for completion of soil and climatological studies in potential agricultural areas. Since agriculture is the responsibility of the GNWT under Section 13(v) of the Northwest Territories Act, extension and support services must be provided by territorial authorities. A territorial agricultural policy is presently being formulated. Once the territorial agricultural policy is announced, the federal government will make land available in response to policies made by the territorial government. In the interim, federal government policy limits the issuance of new leases to market gardening.

MARKET GARDENING

The federal position on market gardening is to encourage the development of market gardens within Commissioner's Lands. Market garden subdivisions will be approved for Crown lands, however, if adjacent Commissioner's Lands are unsuitable or insufficient for market gardening needs. Initially, an applicant may be granted a lease of 4 ha (10 a.). If need can be demonstrated, additional land can be leased to a maximum leasing size of 10 ha (25 a.). In contrast to Yukon, where permanent residency on market garden lands is prohibited, lessees in the NWT may apply for permanent residency after three years of market gardening.⁵

⁵ DIAND Press Release, "New Policy on Market Gardening Announced," Yellowknife, June 17, 1977.

CONDITIONS FOR EXISTING AGRICULTURAL LEASES

Under the previous leasing policy, prior to January 10, 1975, leases were issued for mixed operations, grazing and specialty operations such as muskrat farming. The federal government is committed to honouring these leases, and renewal or extension is decided on individual merit. Under Section 7 of the Territorial Lands Act, the Regional Manager of Lands has, until the disposition suspension, leased Crown land for grazing in 2 590 ha (6,400 a.) maximum-sized parcels. Grazing lands of larger dimensions could be obtained through an Order-in-Council. Conditions attached to a grazing lease usually required some fencing, and specified that no permanent improvements on the land be undertaken. For each grazing lease, the Land Agent routinely specified an animal to land ratio, which was not to be exceeded by the lessee. The general rule of thumb was to allow a maximum of 16 ha (40 a.) for each head of livestock. For existing grazing leases, the minimum annual rent set by the federal government is presently 12.5 cents per ha (2.5 a.).

For the purposes of mixed farming, existing leases are generally limited to 259 ha (640 a.) in size. Previous to January 10, 1975, sales agreements were restricted to 65 ha (160 a.) parcels. Larger parcels for lease and purchase were available, however, through Order-in-Council. Selling price and lease rental costs varied according to the agricultural capability of the land.

In contrast to mixed farming, the sale of Crown land for muskrat farming has always been prohibited under Section 6 of the Territorial Lands Act. This legislation does, nevertheless allow leasing of land for muskrat farming. Before the lease suspension, leases of 2 590 ha (6,400 a.) were issued for this purpose. Larger tracts were also obtainable through a federal Order-in-Council.

All agricultural leases must adhere to the general federal leasing stipulations. The DIAND policy directive 2/77 for example, stipulates that agricultural leases must be setback 61 m (200 ft.) from large lakes,

Takes, all rivers and lands abutting highway rights-of-way. In addition, the Regional Director of the Northern Affairs Program has been given the discretion to permit only leasing of setback lands. Agricultural leases are also subject to the more general stipulations of the Territorial Lands Regulations, which affect all Crown land. Section 12 of the Regulations, for example, reserves all subsurface rights for the Crown. Similarly, the Crown reserves all timber; the right to enter upon, work and remove any rock outcropping required for public purposes; rights-of-way and entry as required to construct and maintain facilities for conveying water to mining operations; and the right to enter upon land to install and maintain any public utility.

QUARRYING

Federal policy towards the leasing of Crown land for quarrying purposes is defined in the Territorial Quarrying Regulations (1957). These are discussed in Chapter XIII.

TIMBER LANDS

Leasing policy for timber lands is dealt with in the Territorial Timber Regulations (1962). These are discussed in Chapter VIII.

DISPOSAL OF SUBSURFACE CROWN RIGHTS

Due to the growing economic importance of oil and minerals, the disposal of subsurface rights plays a central role in the economic well-being of the NWT. Licences are required for the extraction of oil, gas, minerals and coal on alienated and Crown land, as subsurface rights remain the sole domain of the federal Crown. Each type of subsurface extraction activity listed above is governed by specific regulations made pursuant to the Territorial Lands Act, i.e., Canada Oil and Gas Land Regulations (1961), Canada Oil and Gas Drilling and Production Regulations (1961),

Territorial Coal Regulations (1955) and the Canada Mining Regulations (1977). The extraction of subsurface resources appears to have precedence over all other land use types. Any individual may seek an exploratory permit on alienated as well as Crown land. The permittee must pay the landowner for any damages incurred during exploration, but the landowner cannot stop the exploration operations if a permit has been authorized. Upon completion of his exploration operation, the permittee may apply to DIAND for a lease to extract the resource. Detailed information concerning leasing procedures for minerals, oil and gas can be found in Chapter XIII.

RESERVATION OF CROWN LAND FROM DISPOSAL

The federal government can "reserve" land, thereby preventing its disposal through lease or sale to the general public, in two ways. These two methods are the "reserve letter" and the more formal "withdrawal" process, specified under the Territorial Lands Act. The "reserve letter" or reservation by notation is used when a federal department wishes to occupy Crown land on a temporary basis. Temporary transfer of land to the "user federal department" is realized upon receipt of the "reserve letter" from the deputy minister of DIAND who authorizes the transfer. Once the "user" department no longer needs the reserved land, the letter of reserve is cancelled, and control of the land reverts back to DIAND.

The more formal "withdrawal" of Crown lands requires an Order-in-Council (S.19, Territorial Lands Act). It can be employed whenever disposal of certain tracts of land is not deemed to be in the public interest. The Act further empowers the Governor-in-Council to set aside lands for public purposes such as hospitals, public parks, schools and air-fields. The withdrawal process has been used on several occasions in the NWT. Often, withdrawal orders are formulated to set aside land for park or hydro development, or for the protection of wildlife. As examples,

the East Arm of Great Slave Lake was reserved as a potential National Park in 1970, while lands near Baker Lake were initially removed from disposal in 1977 to protect the Kaminuriak caribou herd. The withdrawal procedure has also been used to control ribbon development at the outskirts of established communities. Where land is set aside for public purposes, such as churches and schools, the GNWT is often the prime proponent of the reservation proposal. In such instances, the reservation is entered into the Land Records of DIAND in the name of the GNWT. Disposal of land within the reserved areas so designated will only occur with the approval of the Commissioner. Of the 42 land reservations enacted upon Crown lands in 1978, the GNWT was listed as the user agency in 22 reservations, followed by federal departments with 16 and the NCPC with four.⁶

Land may also be set aside, under the Territorial Lands Act, for the general welfare of the native people. This land reservation is not to be confused with Indian reserves defined by the Indian Act. Rather, this land is generally used for DIAND's Indian and Inuit Program needs, such as housing and schools.

Between 1959 and December 1978, approximately 2,400 leases, 650 reservations, six permits and 600 sales agreements had been recorded for the NWT.⁷

THE BLOCK LAND TRANSFER POLICY

In 1970, the Government of Canada adopted a policy to encourage the evolution of more responsible local government in the Territories.

⁶ Land Resources Division, Renewable Resources Branch, DIAND, Yellowknife.

⁷ Land Management Division, Northern Environment, DIAND, Yellowknife.

Central to the policy was the Block Land Transfer (BLT) Program which coordinated the transfer of administration and control of federal lands in and around northern communities to the GNWT. The transfers concerned surface rights only, and did not include lands under "reservation" for federal departments or agencies.

Although in size the BLTs were intended to meet the expected expansion needs of northern communities for ten years, other considerations were also evaluated. For example, BLTs have also included lands not contiguous to existing communities which are used for community recreation, waste disposal and water supply. Since the inception of the program, 14 BLTs have been authorized in the NWT by Order-in-Council. To date, the largest transfer of land to territorial responsibility in the NWT involved the Yellowknife transfer of 563.2 km² (220 mi.²). Block transfers have also occurred for Rae/Edzo, Inuvik, Aklavik, Fort Smith, Fort Simpson, Fort Providence, Frobisher Bay, Hay River/Enterprise, Norman Wells, Fort McPherson, Fort Franklin, Fort Good Hope and Pine Point (see Table 7).

Since 1975, the BLT Program has been relatively inactive since for transfers are now contingent upon the settlement of native land claims. Clarification of this interim land transfer policy came with the ministerial pronouncement of March 3, 1978. A summary of the new policy is outlined below.

- a) The previous policy of land transfers from federal to territorial administration in large blocks within and surrounding northern communities, referred to as the Block Land Transfer (BLT) Program, is suspended.
- b) The BLT Program is to be replaced by a Revised Northern Land Transfer Program whereby transfers from federal to territorial administration are restricted to built-up areas and to vacant lands required to meet immediate community expansion and development needs only. The new policy will remain in effect pending further developments in land claim settlements and constitutional evolution.⁸

⁸ Appendix B of Press Release, Minister of DIAND, March 3, 1978.

TABLE 7
Block Land Transfers

| Location | Transfer Date | Area | |
|------------------------|---------------|--------------------|---------------------|
| | | (km ²) | (mi. ²) |
| Yellowknife | July 8, 1970 | 563.2 | 220 |
| Rae/Edzo | Oct. 6, 1970 | 281.6 | 110 |
| Inuvik | Aug. 19, 1970 | 243.2 | 95 |
| Aklavik | Nov. 9, 1971 | 20.5 | 8 |
| Fort Smith | Nov. 9, 1971 | 56.3 | 22 |
| Fort Simpson | Nov. 9, 1971 | 358.4 | 140 |
| Fort Providence | Nov. 9, 1971 | 207.4 | 81 |
| Frobisher Bay | July 27, 1971 | 130.5 | 51 |
| Hay River/Enterprise | Feb. 6, 1973 | 363.5 | 142 |
| Norman Wells | Feb. 6, 1973 | 448.0 | 175 |
| Fort McPherson | Dec. 18, 1973 | 79.4 | 31 |
| Fort Franklin | Feb. 26, 1974 | 64.0 | 25 |
| Fort Good Hope | Feb. 26, 1974 | 56.3 | 22 |
| Pine Point | Oct. 7, 1976 | 29.4 | 11.5 |
| Total Area Transferred | | 2 901.7 | 1,133.5 |

Source:

Renewable Resources Branch, DIAND, Yellowknife.

- c) This Federal Land Transfer Policy will be administered, in each territory, as follows:
1. requests for land transfers are to be initiated by the Territorial Governments and made to the Regional Director, Northern Program;
 2. requests for land transfers of built-up areas are to be supported by site plans and legal descriptions;
 3. requests for transfers of vacant lands are to be supported by a statement of requirement, community growth projections and preliminary development plans for the parcels needed;

4. initial review of the requests for transfer are to be made by the Regional Director and forwarded to the ADM, Northern Program, recommending the boundaries of the parcels with substantiation in each case;
5. each transfer proposed is to be subject to the approval of the Claims Policy Committee; and
6. parcels approved for transfer are to be actioned by Order-in-Council as required.

Since the announcement of a revised BLT policy, two transfers have been authorized for the NWT by Order-in-Council. These involved 11.6 ha (28.6 a.) of Crown land at Cambridge Bay and 9.1 km² (3.5 mi.²) of Crown land at Nanisivik. Plans have been initiated for transfers at Lake Harbour, Eskimo Point, Coppermine, Tuktoyaktuk, Cape Dorset and Pangnirtung.⁹

THE GNWT LAND DISPOSAL POLICY

As mentioned in the beginning of this chapter, the Commissioner-in-Council has the authority to administer the surface rights of Commissioner's Lands. Though the area under the control of the GNWT is small in comparison to federally-controlled lands it is concentrated in and around communities. Territorial policy toward land disposition is important, since most community development occurs in the areas designated as Commissioner's Lands.

The Commissioner of the NWT is authorized by the Commissioner's Land Ordinance (1969) to dispose of Commissioner's Lands through lease or sale. He also has the responsibility of applying the conditions and terms to individual disposal agreements, as he sees fit (S.4). Furthermore, the Commissioner may withdraw Commissioner's Lands from

⁹ Land Management Division, Northern Environment, DIAND, Ottawa.

disposal, for any reason, and may reserve land for public purposes (S.8). In any disposal agreement, the Commissioner reserves the timber and quarrying rights, as well as the right of entry for the construction of a utility facility. As is the case of federal Crown lands, separate leases are necessary for quarrying, hay cutting and timber harvesting on Commissioner's Lands. The leasing limits and procedures are defined in the Commissioner's Lands Regulations which were issued in 1970. The GNWT's lands policy may be divided into land administration and land use management. Land administration is conducted through the Commissioner's Lands Ordinance and Regulations, while land use management is largely through use of the Area Development Ordinance and its accompanying Regulations.

TERRITORIAL LAND ADMINISTRATION

The Commissioner's Lands Regulations provide the framework for land administration in the NWT. The Regulations specifically authorize the Director of Local Government to execute leases and agreements for land sale on behalf of the Commissioner. It is implicitly understood that the GNWT has the power to dispose of surface rights to Commissioner's Lands only. The GNWT land disposal policy can be summed up as follows: (1) to encourage growth while ensuring optimum use of land through good planning; (2) to consult the affected municipality on proposed disposal plans, and all aspects of planning; (3) to delegate to the municipal level of government, in stages, the responsibility for disposal to the public as well as the town planning function; and (4) to guarantee the public interest in land transactions.¹⁰

Agreements for sale and leases are available for residential, commercial, industrial, agricultural and grazing purposes. Disposition of

¹⁰ Department of Local Government, Municipal Lands Policy and Practice (Yellowknife, 1978).

Commissioner's lands will be approved, so long as the intended use conforms to existing zoning regulations, and the municipal council reacts favourably to the proposal. To satisfy the land demands, the Department of Local Government establishes subdivisions catering to a particular land use requirement. Accordingly, subdivisions have been allocated for residential, commercial, industrial and agricultural uses. Purchasing or leasing of lots is accomplished through a "first come first serve" basis, or in certain circumstances, through lotteries.

Applications for land acquisition are initially processed by a land agent employed by the Department of Local Government. If the area sought by the applicant is not legally surveyed, the land agent will go to the site and prepare a sketch. In his application, the applicant must state his intentions for the use of the land, any improvements that are planned and the proposed location of the improvements within the purchase or lease area. Upon consultation with the municipal council affected by the proposal, the Director of Local Government will either reject the application, or approve it, subject to conditions that he feels are appropriate. Leases are approved for a maximum of 30 years, with the possibility of renewal for another 30. The annual rental fee is set at not less than 10% of land valuation. The minimum fee payable is \$25 per annum, regardless of size. Adjustments to the leasing fee can occur every five years. As to agreements for sale, purchase price depends upon the size of a land parcel, proposed land use, grade level, distance from population centre, desirability of location and costs to the GNWT for existing, or future services. Upon approval of purchase offer, the applicant must submit one fifth of the purchase price to the Department of Local Government. The Commissioner's Land Regulations allow for up to ten years for the payment of the remainder. The purchaser is also required to complete his improvements and other obligations within 24 months of approval. From November 1976 to November 1978, the Director of Local Government approved 177 leases, 41 sales agreements, 217 land reserves for public purposes and 108 new titles.¹¹ Titles are issued to the purchaser upon the total repayment of the purchase price and completion of required improvements to the land.

¹¹ Lands Division, Dept. of Local Government, GNWT.

TERRITORIAL LAND USE MANAGEMENT - AREA DEVELOPMENT ORDINANCE

As a land use control mechanism, the Area Development Ordinance (1956) is more comprehensive than the Territorial Land Use Regulations. Regulations made under the Ordinance apply to the whole of the NWT, regardless of land ownership. In contrast, the federal Land Use Regulations apply only to unalienated federal Crown land. In addition, the Area Development Ordinance allows the GNWT to control the type and nature of activities in a given area. The federal Land Use Regulations, on the other hand, are intended to minimize environmental damage. They do not provide a framework for a regional land use plan, nor were they promulgated for this purpose.

Basically, the Area Development Ordinance gives the Commissioner the authority to make regulations governing land use in unorganized communities, that is, communities without municipal status. The Ordinance cannot be applied to established hamlets, towns, or cities. Land use in "organized communities" may be determined by locally responsible planning boards pursuant to the Municipal Ordinance, but as yet no local planning boards have been established.

If an unincorporated area is designated as a development area, the Commissioner may issue regulations for the area's zoning, building by-laws, public health, roads and streets, fire protection, gun control and animals (S.4). The development areas created under the Ordinance are not to be confused with Development Control Zones. In the development area, the GNWT has the authority to control land use, but is usually not the landowner. In the Development Control Zone, the GNWT has the power to dispose of land. Interestingly, the formal issuance of land title in the Development Control Zones must come from DIAND, since the land has not been transferred to Commissioner's Lands status.

At present, development areas are in existence for the Yellowknife Watershed Development Area (surrounding the Municipality of Yellowknife), Resolute Bay, Norman Wells, Strathcona Sound, Rae/Edzo and the length of the Mackenzie Highway from the Alberta border to Tuktoyaktuk. More recently, the NWT portions of the Dempster Highway Corridor have been designated as a development area. The creation of development areas for highway corridors presents an interesting departure from earlier practices. The initial objective of land use management in unincorporated communities has been supplemented by an embryonic regional planning system. Since the Mackenzie Highway Development Area comprises 20 480 km² (8,000 mi.²), it is a fairly useful tool for regional planning. Besides the provision of zoning and building regulations, the Mackenzie Highway Development Area Regulations restrict timber cutting, camp construction, etc., without the written consent of an Area Development Officer. Approximately 23 692 km² (9,255 mi.²) of the NWT is currently managed by the GNWT under the auspices of development areas.

In the past, Fort Smith, Hay River, Inuvik, Pine Point, Fort Simpson and Frobisher Bay were controlled by the Area Development Ordinance. These communities, however, have graduated to the status of municipalities, and are therefore, authorized to pass their own land use controls under the Municipal and Planning Ordinances. Although the protection and regulation of land use in unincorporated communities will remain the central objective of the Area Development Ordinance, the GNWT is testing its applicability in other areas. Future development areas will probably include pipeline rights-of-way, airports, agricultural lands, single resource communities and community watersheds.¹² Comprehensive land use management schemes may result from the expanded use of this legislative tool.

¹² Dept. of Local Government, Yellowknife.

FEDERAL-TERRITORIAL LANDS ADVISORY COMMITTEE

In view of the complexity of land administration and land use management in the NWT, cooperation between the federal and territorial levels of government is indispensable. The Federal-Territorial Lands Advisory Committee is the principal coordinating body between the two governments. The Committee is composed of six members; three each from the territorial and the federal governments. Federal members include the Assistant Regional Director of the Renewable Resources Branch, DIAND, (who acts as chairman); the Regional Manager of Lands, DIAND; and the Regional Director, Indian and Inuit Affairs Branch, DIAND. The GNWT is represented by the Directors of the Departments of Local Government, Economic Development, and Town Planning and Lands. In the absence of principal members, alternates may be appointed by their respective departments. The Chairman may authorize the attendance of other territorial and federal officials, when their expertise is required. Other interested groups or land applicants may be invited to attend under special circumstances. The objectives of the Committee are stated in the following terms of reference:

- To coordinate mutual action and the exchange of information between the Federal and Territorial Governments with respect to the administration of Federal Crown lands, including the review as required of applications for Federal lands.
- To review policy and regulatory proposals initiated by the Territorial government that will have an effect on the administration and use of Federal Crown lands, and to review policy and regulatory proposals initiated by the Federal government that will have an effect on the administration and use of Territorially controlled lands.
- To provide a forum for coordination at the regional level of the interests and concerns of the native peoples with respect to the administration of Federal Crown lands.
- To provide a forum for the exchange of ideas related to improving the quality of land administration services provided to the general public by the adoption of complementary land administration methods, procedures, legislation and regulations by both governments and to make recommendations accordingly.

- To identify and recommend areas for special management programs, located outside of Block Land Transfer Areas, so as to ensure controlled growth of highway, agricultural and waterfront developments, to provide advice on the suitability of planning reports prepared for such programs and to establish guidelines for the routine processing of applications in designated areas.

As the reviewing mechanism for Crown land lease or sale, the Committee reviews land applications which might cause friction between the policies of the two governments. The Committee is, however, bypassed in the land disposal process when land disposal agreements exist between the territorial and federal governments. The purchase or lease of cottage lots in mutually approved subdivisions is one such area. The Committee is specifically involved in land applications which involve dual jurisdiction, or touch upon lands claimed by native groups. Dual jurisdiction may occur, for example, in a land application for Crown land within a designated development area. The Committee will ensure, in this circumstance, that the lease type issued for the Crown land conforms to the territorially imposed zoning regulations. The Committee also has the useful function of averting potential conflicts between the federal land disposal policy and native land claims. Through native consultation, the Committee can determine those areas of native interest, and recommend areas to be withheld from disposal until the claims have been settled. Due to the halting of land dispositions for most forms of agriculture, and the limited application of the BLT Program, conflicts of this nature are infrequent, but they do occur.

LAND USE ISSUES

Issues associated with the administration and management of land use are:

- The evolution of jurisdictional responsibilities of the federal and territorial governments is far from complete. In the interim, overlaps and conflicts arise in NWT land administration and land use management.

- Native land claims negotiations have delayed the federal land disposal policy. Consequently, the land needs of northern residents are also being delayed. Residential lands are in short supply in several NWT communities.¹³ Also, the delay in land transfers is slowing the development of territorial responsibility in NWT land administration.
- A comprehensive land use planning approach is difficult due to split federal and territorial jurisdictions.
- Rudimentary ecological data also limit the effectiveness of land use management strategies.
- Uncertainty exists as to the future of "withdrawn areas". Baker Lake residents are particularly anxious about their economic prospects in view of the government's exploration of special land use regulations for the area.

¹³ DIAND News Release, "Revised Northern Land Transfer Policy Announced." Whitehorse, March 3, 1978.

V. WATER MANAGEMENT¹

INTRODUCTION

The provinces have the authority, pursuant to the BNA Act, to legislate on matters concerning domestic and industrial water supply, power development, reclamation, irrigation, recreation and pollution abatement. In the area of water management, federal powers are limited to jurisdiction over navigation and fisheries, as well as water use planning on an inter-jurisdictional level.²

In Canada's north, however, management of water resources remains a federal concern. The Northern Inland Waters Act (1970) provides the legal framework for water management north of 60°. Other federal statutes such as the Arctic Waters Pollution Prevention Act (1970) which applies to only Arctic Marine Waters, and the Canada Water Act (1970), which applies to inland waters at a national scale, furnish the federal government with additional responsibilities. Of a total surface area of 3 374 684 km² (1,304,903 mi.²), the NWT has a fresh water surface area of 133 294 km² (51,465 mi.²).³

1 Main sources are William MacLeod, Water Management in the Canadian North, 1977; DIAND, Procedures, Licensing, Legislation and All That, 1977, pp. 10-13; K. Redpath, Land Use Programs in Canada: Yukon Territory, Lands Directorate, 1979.

2 Environment Canada, Canada Water Year Book, 1976, pp. 1-3.

3 Hedley Swan, Federal Lands: Their Use and Management, Land Use in Canada Series, Lands Directorate, DOE, Ottawa, 1978. p. 42.

Several federal agencies have been mandated to administer the water resource. DIAND has the principal role, as authorized by the Northern Inland Waters Act and Regulations, the Arctic Waters Pollution Prevention Act and Regulations, the Dominion Water Power Act and the Northern Canada Power Commission Act. For the Arctic Waters Pollution Prevention Act and Regulations, responsibilities are delegated by Order-in-Council regarding shipping and non-shipping activities. DIAND is responsible for shipping. For drilling activities, DIAND and EMR share responsibility based on an administrative line between Southampton Island and Baffin Island. South of this line EMR is responsible; north and west is DIAND's jurisdiction. Other federal departments with responsibilities in water management include the Department of the Environment (mandated by the Ocean Dumping Control Act, Canada Water Act, and the Migratory Birds Convention Act), Department of Fisheries and Oceans (Fisheries Act), National Health and Welfare (Public Health Ordinance) and Ministry of Transport (Canada Shipping Act and Navigable Waters Protection Act).

WATER LEGISLATION PERTINENT TO THE NWT

NORTHERN INLAND WATERS ACT

The purpose of this Act, and its accompanying Regulations, is to provide for the proper conservation, development and utilization of the water resources of Yukon and the NWT. The Act was proclaimed in February 1972, and accompanying Regulations were promulgated in September 1972. The Act provides the legal framework for the control of water use in the territories, through a system of water licences and authorizations. Only inland waters are regulated through this legislation and emergency water uses for the prevention of flooding or fire fighting are excluded from water permit regulation. Domestic water use is also exempt from regulation (S.4).

The Act established the Northwest Territories Water Board to administer and issue water use licences. This function is conducted with the aid

of support staff and funding provided by DIAND (S.7 and 8). In cases where water use is purely temporary or of an insignificant quantity, the Controller of Water Rights may issue authorizations (S.26).

The Northern Inland Waters Regulations complement the Act by establishing administrative guidelines for designated "Water Management Areas". The Regulations define the application and water licence fees, and describe the water uses which may be authorized. Under the Regulations, the NWT Water Board may require an applicant to post a security bond the value of which shall not exceed 10% of the estimated capital cost of the water use operation, or \$100,000, whichever is greater (S.13). The implementation of this Act is discussed in detail in the 'Water Use Administration' section of this chapter.

ARCTIC WATERS POLLUTION PREVENTION ACT AND REGULATIONS

The purpose of this Act is to maintain the quality of Arctic waters through the regulation of waste disposal in them. The Act applies to all Arctic waters, as defined by the Act, and to the mainland or islands which constitute the Arctic Ocean watershed. Unauthorized waste disposal, and/or failure to report such disposal may result in federal prosecution. Industrial waste may be deposited in Arctic waters under terms authorized by the Oil and Gas Production and Conservation Act, the Territorial Lands Act or the Public Lands Grant Act. Under Section 10 of the Arctic Waters Pollution Prevention Act, the Governor-in-Council may request modification, or prohibition of construction projects in the Arctic, in order that waste disposal in Arctic waters be minimized. In addition, the Governor-in-Council may designate any area of Arctic waters as a "shipping safety control zone," in which stringent shipping standards for vessels are a prerequisite for their transit through a zone. The Governor-in-Council has several tools at his disposal, to ensure the proper management of Arctic waters. The Arctic Waters Pollution Prevention Act is currently administered by three federal departments. DIAND administers non-shipping activities in all Arctic waters except for Hudson Bay and Hudson Strait, which are the responsibility of EMR. Shipping activities in all Arctic waters are handled by MOT.

FISHERIES ACT AND REGULATIONS

In light of a 1977 amendment, the Fisheries Act has become a useful vehicle for water management north of 60°. In particular, the revised Section 31 gives added protection to "fish habitat." This section prohibits land and water uses which cause the alteration or destruction of fish habitat. The areal application of this Act is quite broad for fish habitat is defined to include spawning grounds, nursery rearing, food supply and migration areas. Consequently, most violators of water use permits in the NWT have been prosecuted under the Fisheries Act rather than the Northern Inland Waters Act.⁴

The NWT Fisheries Regulations regulate the removal of gravel from stream beds, the use of explosives in water, and particular land uses, such as stream crossings, which interfere with stream flow. The Fisheries Act and Regulations are dually administered. The Fisheries and Marine Service of DFO has jurisdictional responsibility for matters relating to fish and fish habitat, whereas the Environmental Protection Service of DOE administers the Metal Liquid Effluent Regulations, the Petroleum Refinery Liquid Effluent Regulations and the general pollution prevention sections of the Act.

CANADA WATER ACT

The Canada Water Act provides the legal framework for joint federal-provincial-territorial management of Canada's water resource (S.3). For water resources that are shared between provinces and territories, the Act allows for the establishment of comprehensive watershed management plans and inter-jurisdictional consultative committees (S.4-7). The Inland Waters Directorate of DOE has administrative responsibility for the Act. The programs and committees set up under the auspices of the Act, such as the Mackenzie River Basin Study, are discussed later in the chapter.

⁴ MacLeod, 1977, p. 86.

OCEAN DUMPING CONTROL ACT

This Act came into effect in December 1975 to regulate, by permit, the dumping of materials into the sea. In addition to Atlantic and Pacific coastal waters, the Act applies to all Canadian "Arctic Waters" as defined by the Arctic Waters Pollution Prevention Act. The Ocean Dumping Control Act details the permit system for dumping, restricted and prohibited effluents, inspection powers, fines and clean-up liabilities of convicted violators.⁵ The Regulations promulgated under the Act in October 1975, define the dumping limits for certain substances and describe the reporting process that must be followed after a spill has occurred. The Environmental Protection Service of DOE administers the Act and Regulations.

DOMINION WATER POWER ACT AND REGULATIONS

Enacted in the late 1940s, this Act regulates the construction of hydro-electric dams on federal Crown lands. The Act reserves waterpower for the Crown. In the NWT, all dams licenced under the Dominion Water Power Act are being relicenced under the Northern Inland Waters Act, as old licences expire. At present, the Con Mines (Cominco) hydro development on the Yellowknife River is the only remaining project in the NWT licenced under the Dominion Water Power Act. The Act is administered by DIAND.

NORTHERN CANADA POWER COMMISSION ACT

This Act establishes the Northern Canada Power Commission (NCP), a federal Crown corporation mandated to plan, construct and manage public utilities in the north. The Commission is the principal producer of

⁵ Revised Statutes of Canada (1970, 1st Supp.) and Northern Transitions II, (CARC 1978).

electricity north of 60°, and operates the main electrical transmission networks in Yukon and the NWT. As a major water user, the NCPC has five approved water licences for the NWT. Only four of the water licences are being actively used.⁶

MIGRATORY BIRDS CONVENTION ACT AND REGULATIONS

For the purposes of water management, Section 35 of this Act prohibits the deposition of waste into waters frequented by migratory birds. The Canadian Wildlife Service of DOE has the responsibility for administering this Act.

OTHER ACTS AND REGULATIONS

Several environmentally oriented Acts contain passages regarding water use and water pollution. These are discussed in Chapter 6.

WATER USE MANAGEMENT

AGENCY STRUCTURE

Water use management in the NWT is a federal concern, and DIAND has the primary responsibility for administering this resource. Within DIAND, the Water Resources Division of the Northern Environment Branch is authorized to policy water use permits, and to undertake environmental studies relating to proposed water uses.

The Water Resources Division has offices in both Ottawa and Yellowknife, and has employees stationed at DIAND's district offices throughout the territory. The Ottawa office deals with policy coordination and

⁶ Water Resources Division, Northern Environment Directorate, DIAND, Ottawa.

planning for northern water management, while the regional office at Yellowknife is more involved in operational matters, particularly the monitoring of water use licences. The Regional Manager of the Water Resources Division has seven professionals and two technologists at his disposal to inspect water use operations and ensure that licence conditions are respected. Of the professionals employed by the Division, however, several have heavy administrative responsibilities in addition to their inspection duties. Hence, the Division has very few full-time inspectors to monitor a vast water surface area.

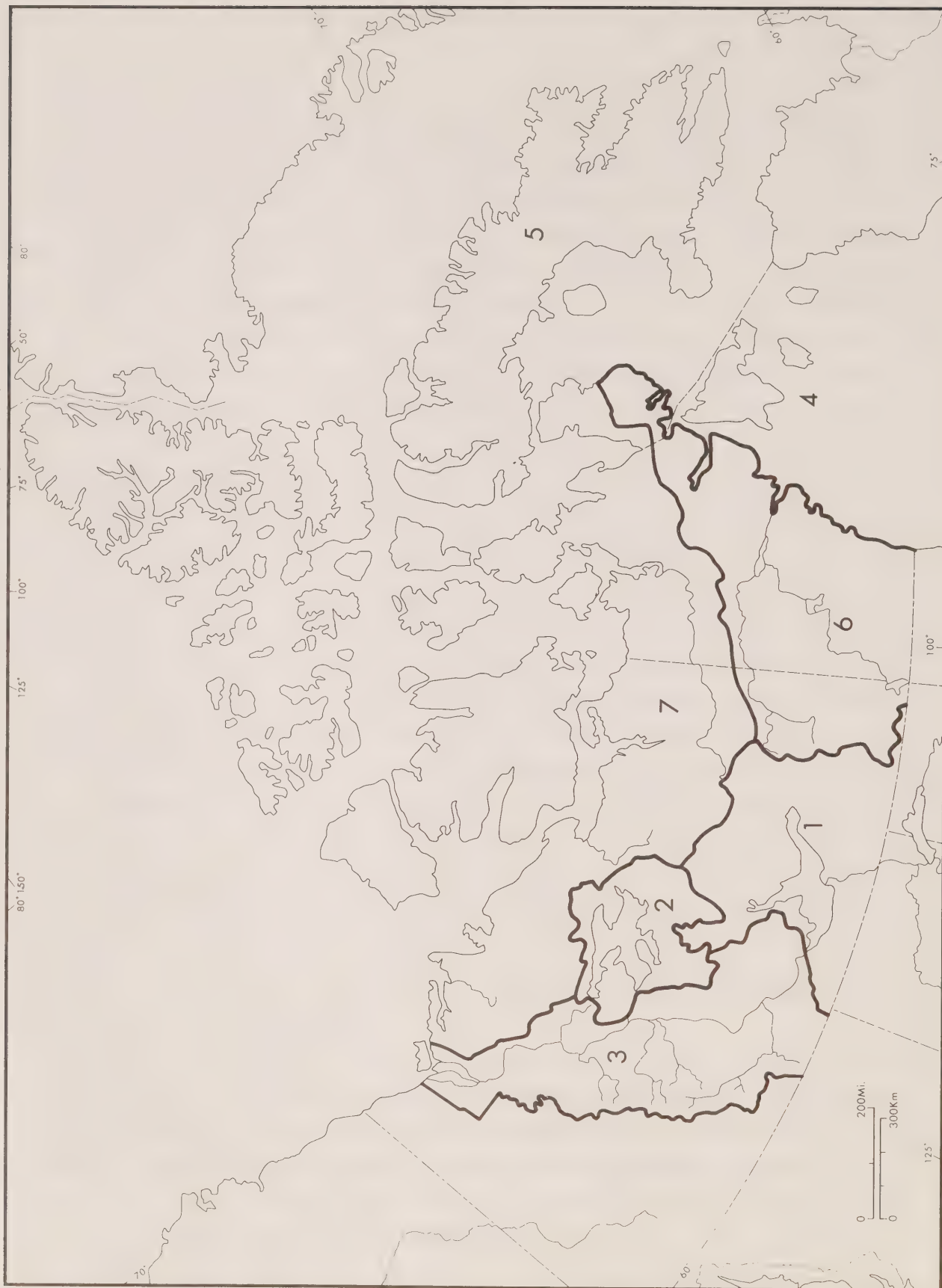
To rectify this administrative gap, Resource Management Officers employed at the district offices have been authorized to undertake water use inspections. In several water management areas land use inspectors double as water use inspectors. Similarly, fisheries inspectors employed by DOE check stream crossings and river barriers, and monitor the result of industrial operations on the receiving environment. These inspectors report any observed discrepancies in water permits to DIAND officials. The Fisheries and Marine Service of DFO and DIAND have signed a formal agreement concerning enforcement practices in water-related matters. A similar code of operations has been accepted by the Environmental Protection Service of DOE and DIAND concerning spills of oil, chemicals and ore concentrates.⁷ The agreements seek to minimize staffing shortages by pooling inspection resources in remote areas.

WATER LICENCING VERSUS WATER USE AUTHORIZATION

Within the seven NWT "water management areas" (see Map 5) established by the Northern Inland Waters Act, (S.3), approval for water use takes two forms: the formal "water licence" or "authorization". Water licences are issued by the NWT Water Board and approved by the Minister of DIAND. This formal licencing procedure involves public hearings and environmental assessments, and is used for large scale water use applications.

⁷ MacLeod, 1977, p. 93.

Map 5. Water Management Areas (NIWA)



Where water use does not exceed 221 044 litres (50,000 gallons) per day, or where the proposed use of water does not exceed 270 days, the "Controller of Water Rights" may authorize the water use without a licence. Similarly, water uses by unincorporated communities in the NWT only requires an authorization.⁸ The vast majority of water uses in the NWT are approved by authorization. The regional manager of DIAND's Water Resources Division, Yellowknife, is the Controller of Water Rights.

In general, water licences are sought for hydro projects, municipal waterworks, industrial use and capital-intensive mining operations. In contrast, water use authorizations are issued for seasonal placer mining operations, oil exploration and diamond drilling, unincorporated communities and stream crossings.⁹

NORTHWEST TERRITORIES WATER BOARD

Whenever a water use requires a licence, the NWT Water Board reviews the application, conducts a public hearing and prepares terms and conditions of a licence to be recommended to the Minister for approval. According to the provisions of the Northern Inland Waters Act, the Water Board must be comprised of not more than nine members, and not less than three, to be appointed by the Minister of DIAND (S.7). The Board was initially composed of nine people, six members from interested federal departments and three representatives whose appointment was recommended by the NWT Commissioner. Since June 1977, however, federal representation on the Board has been reduced to allow for greater local participation. Six members are currently recommended by the Commissioner-in-Council, with the remaining three being nominated by the federal government. Federal representatives are selected from DIAND, NHW, and DOE.

⁸ Northern Inland Waters Regulations, SOR/75-421, July 18, 1975.

⁹ MacLeod, 1977, pp. 83-90.

Territorial appointees are chosen from the Public Service, Territorial Council, and the general public. The Chairman and Vice-Chairman of the Water Board are appointed by the Minister of DIAND. Although it is not specified in the Act, appointments to the Water Board are usually of a two-year duration. The Chairmanship is usually a one-year term.

Pursuant to the Northern Inland Waters Act, the Minister of DIAND must provide the Water Board with sufficient technical and professional expertise with which to fulfill its mandate. Such expertise is available to the Board in the form of the "Technical Committee". The Committee's staff includes the Controller of Water Rights, the Administrator of Inland Waters, the Supervisor of Pollution Control, a hydrologist, biologist and representatives from other agencies as required. Each member of the Water Board also has the right to appoint a personal representative to the Committee. The Technical Committee does much of the ground work for the Water Board, by examining and evaluating technical data, and by furnishing the Water Board with recommendations concerning licence conditions. This system differs significantly from the Yukon Territory, where three specialized sub-committees on hydro-electric, mining and municipal water uses examine licence proposals.¹⁰

A fully equipped laboratory is made available for analytical research to assist the Water Board. The laboratory is a joint venture financed by DIAND and the Water Quality Branch of DOE.¹¹ The Technical Committee meets regularly as it conducts most of the investigative work for water licencing. The decision-oriented Water Board, on the other hand, meets to consider the basework forwarded to it by the Technical Committee.

¹⁰ Macleod, 1977, p. 48.

¹¹ NWT Water Board, Yellowknife.

The Board's meetings usually take place every two months. Water licences may take up to two years to be approved from the initial date of application.¹²

THE WATER LICENCING PROCEDURE

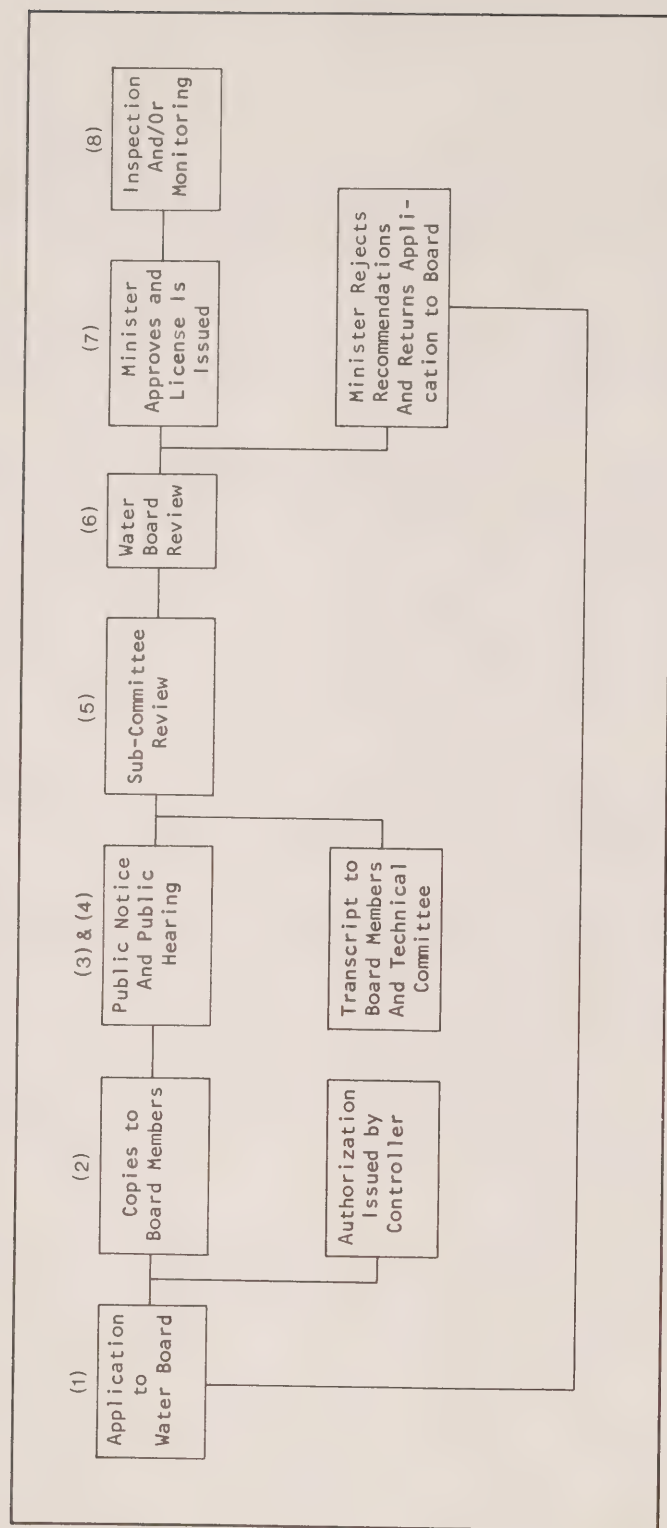
The issuance of water use licences, as with land use permits, involves a lengthy process of application, review and inspection. Unlike the land use permit system, no time limit has been specified for the review process in water licencing. The following summary outlines the steps involved in the water licencing procedure.¹³ A diagrammatic explanation of the procedure can be found in Figure 5.

- The application is received at the office of the Controller of Water Rights where it is reviewed by the Controller and his staff.
- If the usage falls within the prescribed limits, the Controller may issue an Authorization to the applicant. As discussed earlier, the Controller may authorize water use by unincorporated municipalities, and water uses for less than 270 days, or 221 044 litres (50,000 gallons) or less per day. In all application procedures, however, copies of the application and all relevant documents are forwarded to each member of the Water Board. The applicant must supply surveys and designs of his project, depending on the nature of the proposed water use. A \$10 fee must also be included with the application.
- After studying the materials and having determined that all the required information is on hand, the Board must publish a public notice in the Canada Gazette and local papers advising the nature of the licence applied for and inviting interested parties to submit briefs at a public meeting.
- A public hearing is scheduled for the community nearest to the location of the proposed water use. The hearing will take place if the Board receives notice of proposed public participation at least ten days before the hearing. If no submissions are forthcoming the public hearing may be cancelled.

¹² Ibid., p. 50.

¹³ Taken from Procedures, Licensing, Legislation and All That, DIAND, 1977.

FIGURE 5
Water Licensing Flow Chart



Source: DIAND, Procedures, Licensing, Legislation and All That, p. 13.

Note: The numbers along the top of the figure refer to paragraph numbers in the section on summary of licensing of water flow in N.W.T.

- The Water Board meets to recommend approval or rejection of the licence and, if approved, what conditions it shall be subject to. These recommendations are forwarded to the Minister of DIAND.
- The Minister can either approve the licence and conditions as recommended by the Board (he does not have authority to alter the conditions) or reject the recommendation and return the application to the Board. In such a case, the Board may return the application to the applicant for amendment and the entire process could be repeated. No licence applications have been rejected at this advanced stage by the NWT Water Board.
- Before any licence is issued, the applicant may be required to deposit a security bond of up to \$100,000 or 10% of the capital cost of the project, whichever is greater. Licences are issued for a maximum of 25 years. Field staff inspect the project during construction and operation to ensure that licence conditions are met.

AUTHORIZATIONS AND WATER LICENCES ISSUED

Since the enactment of the water use permit system in 1972, authorizations and licences issued for water use have risen steadily. To date, approximately 630 authorizations and 17 water licences have been approved for the NWT. The water licences issued may be divided by activity as follows: mining (5), hydro developments (5), storage reservoirs (1), municipal use (6).¹⁴ Estimates by DIAND project an increase in authorization approval from 174 in 1977/78 to 180 in 1979/80. Similarly, licences issued are expected to increase from 12 in 1978/79 to 14 in 1979/80.¹⁵

Table 8 gives an indication of the water use activities approved for the NWT in 1978. Diamond drilling has been authorized most frequently (75), followed by water engineering projects, i.e.: stream crossings, docks, wharfs, etc. (33); oil and gas explorations (29). Only two activity types were licenced in 1978, namely mining (5) and municipal (3).

¹⁴ Water Management Division, Northern Environment, DIAND, Ottawa.

¹⁵ Northern Affairs Program, DIAND, Yellowknife.

TABLE 8
Approved Water Use Activities in the NWT for 1978

| | Authorizations | Water Licences |
|-------------------------|----------------|----------------|
| Industrial | | |
| Diamond Drilling | 75 | - |
| Mineral Exploration | - | - |
| Mining | 12 | 5 |
| Oil and Gas Exploration | 29 | - |
| Other | 4 | - |
| Total | 120 | 5 |
| Municipal | 18 | 3 |
| Power | - | - |
| Water Engineering | 33 | - |

Source:

Water Management Division, Northern Environment Directorate,
DIAND, Yellowknife.

INTER-JURISDICTIONAL/INTERAGENCY COOPERATIVE PROGRAMS

Several interagency programs have been implemented in the NWT to improve water resource management. These have developed due to the impetus of the Canada Water Act (1970) which places great emphasis on cooperative water basin management. These cooperative programs are outlined below.

MACKENZIE RIVER BASIN STUDY AGREEMENT

An agreement was signed in 1978 between the federal and provincial governments that share jurisdiction over the Mackenzie River watershed.

This agreement formalized a program of studies intended to gather information on the basin's water and related resources. The agreement also formalized the Mackenzie River Basin Committee which is empowered to carry out this study at a cost of \$1.6 million. Fifty percent of the budget is supplied by DOE, and 26% by DIAND. The remainder of the cost will be borne equally by the governments of British Columbia, Alberta, and Saskatchewan.

The Committee is composed of 12 members: four appointed federally, six provincially and two territorially. Federal representation includes DOE (2), DIAND (1) and MOT (1). The GNWT and the Yukon Government each nominate one member. DOE chairs both the main committee and the task force.

As detailed in its proposed program of study (1978-82), the Committee intends to commit the largest share of its budget to "sensitive areas." These areas are deemed to be particularly susceptible to damage when faced with development pressures that may alter the hydrologic system. Intensive hydrologic study and resource inventories are planned in these areas. The Slave River Delta, Slave River and Athabasca Sand Dunes have been designated as "sensitive areas." In addition, the Committee plans a general hydrological study of the whole Mackenzie River system.¹⁶

FLOOD DAMAGE REDUCTION PROGRAM

This program is a cooperative venture involving the federal, provincial and territorial governments. The program aims to reduce future flood damages through the identification of flood risk areas. It is hoped that territorial and local authorities will prevent development in such areas. A general agreement has been signed between the federal government and the GNWT to facilitate flood risk mapping. The cost

¹⁶ Mackenzie River Basin Committee, Study Program 1978-1979.

of the mapping undertaken by DOE's Inland Waters Directorate is shared equally by DIAND and DOE. NWT towns which are presently being mapped for flood risk include Fort Simpson, Fort McPherson, Fort Good Hope, Aklavik and Hay River. Mapping at Hay River has been completed.¹⁷

WATER QUANTITY SURVEY AGREEMENT

Under an agreement between the federal and territorial governments, the Inland Waters Directorate of DOE undertakes water quantity surveys in the NWT. Hydrometric data concerning stream flow, water level and stream sediment are collected. The cost of the surveys is shared by DIAND and DOE.

Staffing for the project consists of 20 water survey technicians stationed at Fort Smith, Fort Simpson, Norman Wells, Inuvik, Baker Lake and Yellowknife. The information collected is used for climatological studies and provides base information for engineers and hydrologists. At the end of the 1976-77 fiscal year, the Inland Waters Directorate operated over 80 hydrometric gauging stations in the NWT, with water levels being recorded at an additional 13 sites.¹⁸ Sufficient funding has been provided for the construction of six to ten new hydrometric stations per year for the period 1978-84.¹⁹

FEDERAL POLICY STATEMENT ON INLAND WATERS

On April 10, 1978, a comprehensive policy statement on inland waters was issued by the federal government. This statement outlines the importance of water as a Canadian resource, lists the responsibilities of the federal government for water and outlines 16 policy directives

¹⁷ Canada Water Act Annual Report, 1977-78, pp. 11-12.

¹⁸ Inland Waters Directorate, DOE, Ottawa.

¹⁹ Inland Waters Directorate, DOE, Yellowknife.

pertaining to inland waters. The directives range from an insistence on water conservation, to a pledge favouring cooperative watershed management schemes.

WATER USE ISSUES

Issues associated with water use are:

- The lack of sewerage facilities is a major concern of northern communities. Water-borne diseases are a serious problem in some water supplies.
- Potential conflicts may arise between competing uses for water, i.e. mining, hydro, transportation, parks, etc. To prevent such an eventuality, the federal government is encouraging watershed-wide management of water resources. The Mackenzie River Basin Study is the first step in such a planning strategy.
- There are overlapping responsibilities of several agencies regarding northern water management.
- Water licence monitoring is limited by the vastness of the NWT water surface area. The Water Resources Division of DIAND has a small staff of water use inspectors.

VI. THE ENVIRONMENT

INTRODUCTION

Much of the responsibility for environmental protection in the NWT rests with the federal government. Four federal departments are the dominant actors in this field: DIAND, DOE, DFO and TC-CCG (Transport Canada - Canadian Coast Guard).

The Northern Environment Protection Branch of DIAND's Northern Affairs Program coordinates two important research programs that collect environmental information. These are the Arctic Land Use Research Program (ALUR) and the Eastern Arctic Marine Environment Study (EAMES).

The Environmental Protection Service (EPS) administers most of the legislation that is the responsibility of DOE. The Environmental Management Service (EMS), also of DOE, houses the Land Use Information Mapping Project which supplies environmental information to decision makers, particularly members of the Land Use Advisory Committee. The Environmental Assessment and Review Process (EARP) is located in DOE. DFO's major role in the NWT is conducted through administration of the Fisheries Act.

The Environmental Protection Ordinance passed by the NWT Legislative Assembly has yet to be tested in the courts. Generally most environmental matters are handled by the federal government with its superior powers and technical capabilities.

Numerous governmental committees are involved in environmental matters in the NWT. Particularly important are the Regional Screening and Coordinating Committee (RSCC), the Arctic Environment Steering Committee (AESC) and the Arctic Waters Advisory Committee (AWAC). Advice is also sought from the Federal-Territorial Lands Advisory Committee (FTLAC)

which may soon amalgamate with the Land Use Advisory Committee, and the Regional Ocean Dumping Advisory Committee (RODAC). Various citizens groups are now involving themselves in northern environmental issues. The Canadian Arctic Resources Committee (CARC) is perhaps the most active International programs, particularly the International Biological Program (IBP), the Man and Biosphere Program (MAB) and the World Heritage Organization have also had an influence on environmental matters in the NWT.

LEGISLATION ADMINISTERED BY DIAND

TERRITORIAL LAND USE REGULATIONS

These Regulations came into force in 1971 and were revised in 1977. They provide for the issuance of permits authorizing companies or individuals to carry out specific land use operations at specified times and locations. Conditions are appended to permits to protect the environment and the interests of local residents. These Regulations are discussed in Chapter IV.

NORTHERN INLAND WATERS ACT AND REGULATIONS

This Act was passed in 1970 and proclaimed in 1972. It provides for the conservation, development and use of the water resources of the territories. It also provides for the establishment of water boards to licence water usage and waste disposal. This Act is discussed in Chapter V.

ARCTIC WATERS POLLUTION PREVENTION ACT (AWPPA)

This Act was passed in 1970 to protect the Arctic waters of the north coast from pollution. It regulates development and shipping activities in Arctic waters to protect the ecological balance of water, ice and land areas. Stringent penalties are provided for in the Act. Absolute civil liability is imposed on persons, including ship and cargo owners,

for damage resulting from the unlawful deposit of waste. Section (4(1)) of the Act prohibits the deposit of waste on any area of the mainland or Arctic islands where there is the possibility of it entering salt water; the Northern Inland Waters Act governs the deposit of waste in fresh water. Regulations under the AWPPA (SOR/72-253 as amended) allow the deposit of domestic waste under conditions authorized by the relevant Public Health Ordinance, and the deposit of industrial waste as authorized under the Oil and Gas Production and Conservation Act, the Territorial Lands Act or the Public Lands Grants Act.

The AWPPA is administered by the Arctic Waters Advisory Committee (AWAC). Administration and enforcement of this legislation is discussed in a later section of this chapter.

OIL AND GAS PRODUCTION AND CONSERVATION ACT¹

The Arctic Waters Oil and Gas Conservation Committee helps to establish operating conditions for oil and gas development activities in the north under the Oil and Gas Production and Conservation Act. This Act and its draft regulations may require a proponent to provide environmental information. "While regulations under this act are yet to be passed, it does give authority to the Governor-in-Council under Section 12(q) to prescribe measures necessary to prevent air, land or water pollution as a result of the exploration and drilling for, or the production, storage, transportation, processing, or handling of any oil or gas substance obtained from oil or gas."²

¹ Based on interview with O.H. Loken, 1979; Beauchamp, 1976, p. 35; DIAND, Eastern Arctic Marine Environmental Studies, 1977, p. 1.

² Beauchamp, 1976, p. 35.

LEGISLATION ADMINISTERED BY DOE

MIGRATORY BIRDS CONVENTION ACT

The Canadian Wildlife Service (CWS) of DOE administers the Migratory Birds Convention Act. Section 35 of the statute prohibits the deposition of wastes in waters or areas frequented by migratory birds.

CLEAN AIR ACT

This Act which was passed in 1970 is the principal legislation used to control air quality. Specific standards under the Act which apply to the NWT include:

1. Regulations
 - a) Lead-Free Gasoline Regulations
 - b) Leaded Gasoline Regulations
 - c) Secondary Lead Smelter National Emission Standards Regulations
 - d) Asbestos Mining and Milling Emission Standards Regulations
 - e) Arsenic Emissions from Gold Processing Standards Regulations
2. Guidelines
 - a) Asphalt Paving Industry National Emission Guidelines
 - b) Arctic Mining Emission Guidelines
 - c) Sewage Sludge Incineration National Emission Guidelines
 - d) Natural Gas Processing National Emission Guidelines
 - e) Petroleum Refining National Emission Guidelines
 - f) Thermal Power Generation National Emission Guidelines
3. Objectives
 - a) National Air Quality Objectives

ENVIRONMENTAL CONTAMINANTS ACT

The Environmental Contaminants Act was proclaimed in 1976. It requires industry to provide information concerning designated contaminants and empowers the federal government to ban the use, manufacture and importation of hazardous substances. Cosmetic use of fluorocarbons has been banned under the Act and guideline standards have been issued for air emissions and effluents of several major industries. The Act is designed to complement existing legislation and to provide a residual federal power. Penalties for contravention of the Act include fines of up to \$100,000 or imprisonment for up to two years. The Act has been applied in the north to the control, handling and disposal of PCBs and to the obtainment of information on industrial uses of mercury and PCBs.

CANADA WATER ACT

This Act provides for federal-provincial-territorial consultation and agreements for comprehensive water basin planning. The Act also provides for the designation of water quality management areas, the designation of joint agencies for water quality management and the establishment of commissions or other bodies to conduct comprehensive multipurpose water resource management. Provision for control of nutrients, under the Phosphorus Concentration Control Regulations, is made by this Act.

The deposit of waste in waters comprising a water management area, or the deposit of waste that may enter such an area, is prohibited by Section 8 of the Act, and anyone who violates this section is subject to a fine not exceeding \$5,000. Section 16(s) authorizes the Minister to make regulations regarding the quantities and type of waste (if any) that may be deposited in a water quality management area.

OCEAN DUMPING CONTROL ACT (ODCA)

Under the provisions of the Ocean Dumping Control Act, DOE has adopted a permit system to control the dumping of all substances in the ocean zones patrolled by Canada. The EPS administers ODCA with advice through the Regional Ocean Dumping Advisory Committee, DIAND and DFO. This agency prohibits the dumping of harmful substances, monitors dumping sites to determine the effects of dumping and establishes criteria respecting the effect of substances on the marine environment.

LEGISLATION ADMINISTERED BY DFO

FISHERIES ACT

This Act which was originally promulgated in 1868 provides DFO with various powers to protect the environment. It prohibits the obstruction of rivers and streams in which fish live and deals with spawning grounds, fishing licences, fishery officers, pollution of fishery waters and methods used to kill fish.

On September 1, 1977, an amendment clarified and strengthened the environmental protection provisions of the Act. Section 33.1 requires that information on proposed works or undertakings likely to result in the deposit of deleterious substances in waters frequented by fish be submitted to the Minister of Fisheries and Oceans. Section 33(5) establishes a maximum fine of \$50,000 upon conviction of depositing deleterious substances in waters frequented by fish. Subsequent offences are subject to a \$100,000 fine. In addition, each day of prohibited action is considered to be a separate offence. Section 33(7) allows the court to issue orders requiring positive action to prevent further deposit of deleterious substances. Absolute civil liability of owners, carriers and individuals for the cost of cleanup is established in Section 33(10-10.5). In addition, fishermen are given a right of action for loss of income due to the deposit of deleterious substances, by sources other than ships (S.33(10.1)).

Section 33.1 requires the Minister to be provided with plans and specifications of alterations or extensions to works likely to result in the deposit of deleterious substances in waters. This information requirement now applies to any operation. Details concerning the works themselves and how the water and fish habitat is likely to be affected by the works must also be provided. Persons causing spills or owners of spilled substances are required to immediately report spills to designated inspectors (S.33.2(4)). Failure to report is an offence (S.33.4). These amendments (S.33.1) give some characteristics of a limited statutory environmental assessment requirement.³

LEGISLATION ADMINISTERED BY TRANSPORT CANADA - CANADIAN COAST GUARD (TC-CCG)

TC-CCG plays a minor role in protecting the environment of the NWT. Under the Navigable Waters Protection Act it refers applications for "work approvals" to agencies within DFO and DOE. A "work" may include (S.3): a) bridge, boom wharf, dock pier, tunnel pipe, etc.; b) dumping of fill or excavation of material from a river bed; c) any structure, device or object that may interfere with navigation. TC-CCG aids EMR and DIAND in administering and enforcing the Arctic Waters Pollution Prevention Act and accordingly is represented on the AWAC.

TC-CCG administers the Canada Shipping Act. Regulations passed under this legislation that are of relevance to the NWT environment include the Oil Pollution Prevention Regulations and the Garbage Pollution Prevention Regulations. The Oil Pollution Prevention Regulations (SOR/71-495) prohibit the discharge of oil by ships except under specified conditions or for purposes pertaining to safety. "Unavoidable" accidental leakage is also permissible (S.12). The Act requires all oil discharges to be reported to the Minister of Transport.

³ Lucas and Peterson, 1978, p. 68.

The Garbage Pollution Prevention Regulations (SOR/71-654) prohibit ships from discharging garbage into waters not designated as a shipping safety control zone under the Arctic Waters Pollution Prevention Act.

ORDINANCES OF THE GNWT

ENVIRONMENTAL PROTECTION ORDINANCE

The Environmental Protection Ordinance adopted by the Territorial Council in 1973 carries considerable potential as a means of enforcing environmental protection in the NWT. This Ordinance is patterned on the Environmental Protection Act of Ontario, in that it prohibits the discharge of contaminants into the natural environment that are likely to impair the quality of the environment or adversely affect the health, safety or comfort of persons. 'Contaminant' is broadly defined to include even heat and noise (S.2(b)). Similarly, 'environment' includes land, air and water (including snow and ice) and all plant and animal life (S.2 (d)).⁴

Under Section 5 a person may be required:

1. to install safeguards to prevent the discharge of contaminants into the environment;
2. to site, transport or store any contaminant in the manner set out in the order;
3. or to have on hand at all times such equipment and material necessary to alleviate the effect of any discharge of contaminants as may be specified in the order.

"A person discharging a contaminant may be ordered to repair or remedy any injury or damage to the environment resulting from the discharge."⁵

⁴ Lucas and Peterson, 1978, p. 69.

⁵ Beauchamp, 1976, p. 45.

The Ordinance is administered by a Chief Environmental Protection Officer who is assisted by inspectors. Every inspector is a peace officer for the purpose of enforcing the provisions of the Ordinance.

Game Officers and Fire Safety Officers in the NWT have been designated inspectors under the Ordinance. The Chief Environmental Protection Officer may appoint Federal employees, such as Fisheries Officers, Forestry Officers and Land Use Inspectors, as inspectors under the Environmental Protection Ordinance.

Public supervision is envisaged as the means to ensure that inspection and enforcement duties are minimized. Persons with knowledge of local conditions are encouraged to take a role in enforcement, for example, RCMP officers and municipal secretary-managers are usually involved. In practice, once unacceptable impairment of the environment occurs, there is an almost automatic response by the local inhabitants and that response is communicated to inspectors charged with enforcement.⁶

The Arctic Mining Emission Guidelines are incorporated as standards under the Environmental Protection Ordinance in the NWT. Inventory and inspection work was initiated at mines in 1977-78 following these standards.⁷ The enforcement provisions of this Ordinance have been little used and have not been tested in the courts.⁸

⁶ G. Price, "The Environmental Protection Ordinance: An Addition to the Morass of Legislation", 1976, p. 370.

⁷ DIAND, ACND, 1977-1978 Government Activities in the North, 1978, p. 77.

⁸ Northwest and Pacific EPS Regions, 1977, p. 10.

PUBLIC HEALTH ORDINANCE⁹

Sanitary standards for sewage disposal and water quality standards for drinking water are controlled by the Department of Health and Welfare on behalf of the GNWT through the Public Health Ordinance. The NWT Water Board has undertaken much of the responsibility for the establishment of standards and enforcement.

PESTICIDE ORDINANCE¹⁰

This Ordinance requires that no person shall apply a pesticide on an open body of water or on any other area of the territories unless he holds a permit to do so issued by an inspector. Inspectors, who are appointed by the Commissioner, may append conditions to permits. Under Section 7, the inspector may suspend or terminate the use or method of application of a pesticide when it is dangerous to the health of persons or any animal, or when it is harmful to plant life.

SCIENTISTS ORDINANCE

The Scientists Ordinance provides that no person shall carry on scientific research in or based on the territories unless he is the holder of a licence under the Ordinance. If purely archaeological work is being conducted, a permit is issued under the Archaeological Sites Regulations. Every person is required to submit a report setting forth the work conducted, the information obtained and any specimens collected under the Archaeological Sites Regulations.

FOREST PROTECTION ORDINANCE

This Ordinance is largely concerned with fire prevention and fire fighting. It is discussed in Chapter VIII.

⁹ Based on Northwest and Pacific, EPS Regions, 1977, p. 11.

¹⁰ Based on NWT 1970 (2nd), C.M., S.1.

COMMISSIONERS LAND ORDINANCE

This Ordinance gives the Commissioner of the NWT authority to dispose of lands which have been transferred to the NWT by Order-in-Council through the terms and conditions of sale, lease, or licence prescribed by the Commissioner. Some environmental protection can be encouraged through these conditions. This Ordinance is discussed in Chapter IV.

AREA DEVELOPMENT ORDINANCE

"This Ordinance is a form of zoning control which applies to all lands in the territories and not only those which can be disposed of by the Commissioner...The Area Development Ordinance permits the Commissioner in each territory to make regulations applying to specific unorganized districts, on such matters as zoning, building by-laws, control of roads and streets, public health, fire protection, and animal control."¹¹ This Ordinance is also discussed in Chapter IV.

The Game Ordinance, the Mining Ordinances, the Historical Resources Ordinance and the Territorial Parks Ordinance also provide for environmental protection. They are discussed elsewhere in this report.

DIAND NORTHERN AFFAIRS PROGRAM, NORTHERN ENVIRONMENTAL PROTECTION BRANCH

The Northern Environmental Protection Branch of the Northern Program coordinates, develops and recommends policies, strategies, plans and regulations for environmental protection in Yukon, the NWT and in adjacent offshore regions. It formulates policy concerning the environmental impact of northern development and engineering, recommends northern research programs and serves as the link between the Northern

¹¹ Beauchamp, 1976, p. 43.

Program and the Federal Environmental Assessment and Review Office within DOE. The Environmental Studies Division of the Northern Environmental Protection Branch manages the Arctic Land Use Research Program (ALUR) and the Offshore Environment Division administers the Eastern Arctic Marine Environmental Study (EAMES).

ARCTIC LAND USE RESEARCH (ALUR) PROGRAM¹²

ALUR was established by DIAND to complement the objectives of the Territorial Lands Act and Regulations by providing information and research support for the private sector. An Advisory Committee on ALUR was formed to enable the ALUR program to benefit from the expertise available in Canadian universities and to provide a means for exchange of information regarding northern research between government, industry and the academic community. The committee consists of four members from the university community, four members from industry and the ALUR Manager who is the chief of the Environmental Studies Division.

The ALUR program for 1978-79 includes: oil spill studies at Norman Wells, Inuvik, Richards Island and Tuktoyaktuk; studies concerning disposal of drilling fluids in the Arctic Islands and Mackenzie Delta; land use mapping projects southwest of Baker Lake; revegetation studies of mine tailings using pre-adapted vegetation in Smoking Hills and Norman Wells; studies on the interaction between fur-bearing mammals and seismic lines in Fort Macpherson; siltation studies at Ya-Ya Lake in the Mackenzie Delta; and the production of a series of annotated bibliographies on the ecology of the Arctic archipelago.¹³

¹² Based on ALUR Program, 1978-1979.

¹³ ALUR Program, 1978-79.

EASTERN ARCTIC MARINE ENVIRONMENTAL STUDIES PROGRAM¹⁴

The EAMES program operates parallel to ALUR for marine based research, but it has slightly different objectives. It was established in 1977 to produce an environmental impact statement concerning petroleum development around Baffin Island for submission to the Federal Environmental Assessment Review Office (FEARO). Studies have subsequently been undertaken by industry under the guidance of EAMES to integrate guidelines such as those prepared by the Interdepartmental Environmental Review Committee and EARP. Government agencies and native groups have also been expressly involved. For instance, DOE's Ice Covered Waters program and its Arctic Biological Station made contributions, as did the GNWT, regarding studies of polar bear denning. EAMES reviewed two impact assessments in 1977-78 and forwarded them to EARP.

EAMES also has an advisory committee which has held two meetings, one in Broughton Island and one in Frobisher Bay. The EAMES program is continuing to design appropriate environmental terms and conditions to be followed during drilling of offshore exploration wells. Extensive community consultation will accompany this program.

DOE ENVIRONMENTAL MANAGEMENT SERVICE (EMS)LAND USE INFORMATION MAPPING¹⁵

The Land Use Information Mapping project was initiated by the Lands Directorate of the Environmental Management Service at the request of

¹⁴ Based on DIAND, Eastern Arctic Marine Environmental Studies, 1977.

¹⁵ Based on Northern Land Use Information Map Series 1978-79; Agreement between Indian and Northern Affairs Canada and Environment Canada to undertake a Northern Land Use Information Mapping Program during the period 1978-1983, September 1978. Taylor (1979 and 1975), and Taylor and Simpson-Lewis, (1977).

DIAND in 1971. Its objectives were to create a convenient reference system, and to summarize a wide range of data on renewable resources and related human activities. The map system complements the management and administration of land use activities which are largely controlled through the Territorial Land Use Regulations. About 50% of the funding for the project is from DIAND's ALUR program.

The Mackenzie Valley was the first area to receive attention. Forty-four maps of that region were published in 1972 and were subsequently updated in 1976. More recently, in 1977, 21 maps were published of Banks Island and the region north of Great Bear Lake. To date, approximately 1 774 045 km² (685,000 mi.²) or 52% of the NWT has been mapped. By late fall of 1979, 149 map sheets will have been published for the NWT.

The maps contain information on wildlife, hunting and trapping, fisheries and recreation and tourism. Notes and data on climate, history, settlements, IBP sites, archaeological sites, forest and soil resources and mining are also included.

The Land Use Information Map Series has been well received and its goals appear to have been met.¹⁶ The maps are used by the Land Use Advisory Committees to evaluate land use applications and to identify potential land use conflicts. Applicants for land use permits are often required to refer to the maps before submitting applications.

An agreement was finalized between DIAND and DOE in September 1978, to continue the project until March 1983. During this period, research and mapping will concentrate on the southern Arctic Islands. The 1978-79 program will see publication of 26 maps of the Kazan Uplands in the southeast NWT.

¹⁶ Taylor and Simpson-Lewis, 1977, p. 50.

DOE ENVIRONMENTAL PROTECTION SERVICE (EPS)¹⁷

The EPS ensures that the federal government's responsibilities for environmental protection are enforced, and develops environmental regulations, guidelines, codes, protocols and other protection and control instruments.¹⁸ It also "serves as an advisory body to other federal departments administering legislation under which environment regulations are developed."¹⁹

EPS activities in the NWT are conducted through its district office in Yellowknife, which is administered by the Western and Northern Regional Office. The Western and Northern Regional Board that used to coordinate DOE activities in the NWT has been replaced.

EPS ACTIVITIES IN THE NWT

For activities mandated by legislation under EPS administration, such as the Fisheries Act, Ocean Dumping Control Act and Environmental Contaminants Act, EPS deals directly with industry by negotiating for compliance with regulations, issuing permits where applicable, conducting surveillance to ensure compliance, monitoring effects of pollution on the receiving environment and initiating enforcement activities. For activities arising from legislation that is administered by other departments, EPS serves in an advisory capacity through two main mechanisms: coordinating inputs into the Land Use permit and Water Authorization processes via an EPS Northern Program coordinator, and through representation on a number of decision-making committees.

¹⁷ Based on ACND, 1978, p. 77; EAMES, 1977, p. 15; Environmental Source Book, 1978, p. 6; Northwest and Pacific EPS Regions, March 1977.

¹⁸ ACND, 1978, p. 77.

¹⁹ Northwest and Pacific EPS Regions, March 1977, p. 4.

EPS undertakes intensive biological and chemical studies of aquatic and marine ecosystems to determine effects of industrial and municipal pollution, and to define the zone of influence in the receiving environment. Reports on its work, currently averaging 10 publications per year, are used by EPS and by other agencies in identifying pollution problems, assessing effectiveness of regulatory controls and monitoring recovery of the ecosystems.

EPS staff have been active on committees that deal with environmental emergencies in the north. Two recent examples are the Standing Committee on Arsenic in Yellowknife and the Tripartite Committee on Toxic Pollutants.²⁰ EPS also participates on the NWT Water Board and its technical advisory committee. Specific projects which the EPS has undertaken in the NWT include: air quality studies on carbon monoxide concentrations caused by cold weather internal combustion operation in Yellowknife; clean up programs of Northern Canada Power Commission installations; inspection of all major DEW line stations; regular inspection and monitoring of federal water treatment plants; screening of projects for EARP; investigations of the abandonment of artificial islands in the Beaufort Sea; inspections of chemical/oil spills; and monitoring and surveillance of water quality at all major industrial sites and major communities in the NWT.²¹ The Federal Environmental Assessment and Review Process is the responsibility of EPS staff.

FEDERAL ENVIRONMENTAL ASSESSMENT REVIEW OFFICE (FEARO)

The decision to institute a Federal Environmental Assessment Review Process for federal projects, programs and activities was made by Cabinet on December 20, 1973, amended on February 15, 1977 and most recently reformulated through the 1979 Government Organization Act.

²⁰ Northwest and Pacific EPS Regions, 1977, p. 15.

²¹ Ibid, pp. 25-29.

By the 1973 Decision, the Minister of DOE was directed to establish, in cooperation with other ministers, a process to ensure that federal departments and agencies:

- take environmental matters into account throughout the planning and implementation of new projects, programs and activities;
- carry out an environmental assessment for all projects which may have adverse effects on the environment before commitments or irrevocable decisions are made (projects which may have significant effects have to be submitted to the Federal Environmental Assessment Review Office for formal review);
- use the results of these assessments in planning, decision-making and implementation.

The Process established by the Minister of DOE, through the Interdepartmental Committee on the Environment, is based essentially on the self-assessment approach. Departments and agencies are responsible for assessing the environmental consequences of their own projects and activities, or of those for which they assume the role of initiator. They are also responsible for the implementation of any mitigating measures identified. The Federal Environmental Assessment Review Office (FEARO) was established in 1974 to coordinate EARP procedures. In the NWT, the EPS Northern Program Coordinator is responsible for organizing EARP.

As early as possible in the planning phase, the initiating department screens all projects for potential adverse environmental effects. One of the following four decisions is possible from this procedure:

1. No adverse environmental effects, no action needed.
2. Environmental effects are known and are not considered significant. Effects identified can be mitigated through environmental design and conformance to legislation and regulations. The initiator is responsible for taking the appropriate action but no further reference to the procedures of the Environmental Assessment and Review Process is required.

3. The nature and scope of potential adverse environmental effects are not fully known. A more detailed assessment is required to identify environmental consequences and to assess their significance. The initiator therefore prepares or procures an Initial Environmental Evaluation (IEE). A review of the IEE will indicate to the Initiator whether alternative (2) above or (4) below should be followed.
4. The initiator recognizes that significant environmental effects are involved and requests the Executive Chairman, Federal Environmental Assessment Review Office, to establish a Panel to review the project.

If the Initiator decides to submit a project for Panel review, that project may not proceed until this review is completed and recommendations are made to the Minister of DOE.

The Panel established by the Executive Chairman, FEARO, issues guidelines for the preparation of an Environmental Impact Statement (EIS) by the project proponent, reviews the EIS, obtains public responses to the EIS and acquires any additional information deemed necessary. It then advises the Minister of DOE on the acceptability of the project in environmental terms. The Minister of DOE and the initiating department decide what actions may be taken in light of the Panel's report.

The projects listed below have been submitted to EARP and are at various stages in the process. Additional information is presented on some of these proposals in Chapters XIII and XIV.

ARCTIC PILOT PROJECT

An Environmental Impact Statement (EIS) was completed for this project early in 1979 by Petro-Canada and DIAND. The project involves the development of natural gas facilities in the area of Melville Island, Barrow Strait, Lancaster Sound and the Eastern Arctic. The greatest environmental hazard posed by this project relates to drilling and construction of a gas-gathering system. Marine mammals, fish and bird populations could also be affected. The EIS for this project has been

circulated to governmental agencies for their review. After this review is completed the Panel will make the review public and issue a statement of deficiencies which will constitute guidelines for the completion of the assessment. Public meetings regarding this proposal are expected to occur in late 1979 or early 1980.

CN TELECOMMUNICATIONS SYSTEM - WOOD BUFFALO NATIONAL PARK

Parks Canada has initiated an assessment of a proposal by CN to build two microwave towers and support systems in the northern section of Wood Buffalo National Park. Environmental concerns related to this project focus on habitat and migratory routes of whooping cranes and the aesthetic damage that the park may suffer. "The Panel review has been suspended pending further clarification of the project."²²

DEMPSTER PIPELINE PROJECT

Foothills Pipelines Yukon Ltd. has proposed to construct and operate a gas pipeline from the Mackenzie Delta to Whitehorse, where it would join the projected Alaska Highway gas pipeline. This proposal was referred to FEARO in January 1978. A Panel has been designated to review the EIS when it is submitted.²³

EASTERN ARCTIC OFFSHORE DRILLING - SOUTH DAVIS STRAIT PROJECT

An EIS on a proposal for exploratory drilling for gas in the South Davis Strait has been completed by Imperial Oil Ltd. under guidelines set by DIAND in 1976 and modified in 1977 according to Panel requirements. The Panel held hearings in Pangnirtung, Allen Island, Lake Harbour, Cape Dorset and Frobisher Bay before submitting a report to the Minister on November 1, 1978. It recommended that the project proceed as proposed,

²² FEARO, March 1979, p. 15.

²³ FEARO, March 1979, p. 16.

with conditions concerning the monitoring of the physical environment, industry and government contingency plans, compensation and liability.²⁴ These conditions were accepted by the Ministers of DOE and DIAND in January 1979²⁵ and will be translated into operating conditions under the Oil and Gas Conservation Act.²⁶ Environmental concerns focused on the effects of an oil well blowout.

EASTERN ARCTIC OFFSHORE DRILLING - NORTH DAVIS STRAIT PROJECT

This project, similar to that in the South Davis Strait, was also initiated by DIAND. PetroCan is currently preparing an EIS to be submitted to a Panel. Public hearings will be scheduled after receipt of the EIS.²⁷

LANCASTER SOUND DRILLING PROJECT

This proposal for offshore drilling by Norlands Petroleum Ltd. was referred to EARP by DIAND in July 1977. Again, concern is related to the environmental effects of a possible oil blowout. The Report of the Environmental Assessment Panel was published in February 1979, after a series of community based public hearings was held. It concluded that: "The proponent is insufficiently prepared at this time to undertake the proposed drilling in 1979 in a safe manner and with minimum risk to the environment" and "that the responsible federal coordinating and planning body (DIAND) use the time available from a deferment of drilling to address on an urgent basis, with adequate national and regional public input and taking into account the various forces at work, the best use(s) of the Lancaster Sound Region."²⁸ The Minister of DOE has subsequently agreed with these recommendations.²⁹

²⁴ FEARO, December 1978.

²⁵ FEARO, March 1979.

²⁶ Loken, 1979.

²⁷ FEARO, March 1979, p. 21.

²⁸ FEARO, February 1979, p. 73.

²⁹ FEARO, March 1979, p. 33.

MACKENZIE DELTA GAS GATHERING SYSTEM

Imperial Oil, Gulf Oil and Shell Oil proposed the construction and operation of three gas processing plants and transportation facilities to supply a Dempster pipeline. They requested a review from DIAND in 1975 but suspended the projects in 1977. However, an EIS for one of the plants (Taglu) has been prepared by Imperial Oil and will be distributed for technical review. "In connection with the Dempster Pipeline Project (discussed earlier) an overview will be submitted to consolidate the description and mitigation of gas processing plant and pipeline impacts. The Panel will make arrangements for technical review of the Taglu EIS after which a report to the Minister will be prepared."³⁰ "Major environmental hazards associated with this project are disruption of wildlife patterns, permafrost degradation, and potential spills of fuel and chemicals into adjacent river channels."³¹

MACKENZIE RIVER DREDGING PROGRAM

The review of this project to improve the navigation channel of the Mackenzie River was initiated by the Ministry of Transport in 1976. Planning for this project is in abeyance "because of a change in demand for large scale dredging activity on the Mackenzie River."³²

POLAR GAS PROJECT

This project involves the development of gas fields in the high Arctic islands and the construction of a pipeline to bring the gas to the south. The Polar Gas Consortium and Panarctic Gas Limited requested

³⁰ FEARO, June 1979, p. 35.

³¹ ACND, 1978, p. 81.

³² FEARO, June 1979, p. 37.

to review the proposal in 1975. An EIS has been prepared and distributed to the Environmental Assessment Panel, technical review agencies and the public.³³

GUIDELINES AND COMMITTEES

Since about 1972, guidelines have been established by a number of agencies to assist in ecologically sound northern development. These include the Pipeline Guidelines, the Expanded Pipeline Guidelines, the Guidelines for Scientific Activities in Northern Canada, Guidelines to assist in the application of the Territorial Land Use Regulations and guidelines illustrating methodologies appropriate for preparation of initial environmental evaluations for different kinds of industrial and public works projects. The EPS has a special publication series sub-titled "Codes, Protocols and Guidelines."³⁴

A number of committees have been established in Ottawa to coordinate and provide information exchange on mutual areas of concern and issues related to the environment. Among such committees are the Interdepartmental Committee on Water and the Interdepartmental Committee on the Environment. DIAND, EMR, DOE and DFO have established a headquarters committee, the Interdepartmental Environmental Review Committee, to serve as a forum for information exchange on areas of mutual concern and issues related to the environment north of 60°. In addition to these interdepartmental committees, individual departments have established committees to serve as forums for information exchange. A variety of departmental committees report to the Regional Screening and Coordinating Committee. These include the:

³³ FEARO, March 1979, p. 39.

³⁴ Lucas and Peterson, 1978, p. 74.

- Environmental Contaminants Committee
- DOE Regional Mining Committee
- DOE Regional Transportation Committee
- Regional Dredging Committee
- DOE Regional Hydropower Committee
- Arctic Environment Steering Committee
- DOE Mackenzie Basin Committee
- DOE Regional Hydrocarbon Committee
- Regional Laboratory and Field Activities Coordinating Committee
(Aquatic Environmental Quality)

ARCTIC ENVIRONMENT STEERING COMMITTEE

This committee consists of two representatives from each of the Western and Northern, and Pacific and Yukon Regional Boards. It generally meets every two months. The terms of reference of this committee are:

- to facilitate the exchange of information among field and HQ managers on environmental developments north of 60° by means of periodic status reports, discussion of projected activities and workshops as appropriate on topics of particular concern to the members;
- to encourage and promote coordination of DOE activities north of 60° and maintain under continuing review the effectiveness of DOE interaction with other government agencies in the north;
- to define short and long-term problems and issues of concern to DOE that relate to the Department's legislative and policy mandates north of 60°; and
- to formulate by consensus of AESC members, recommendations and suggested courses of action for the consideration, ratification and/or direction of the Western and Northern Regional Board Executive.³⁵

³⁵ Western and Northern Regional Board, 1979.

ARCTIC WATERS ADVISORY COMMITTEE (AWAC)

AWAC is responsible for the administration of the Arctic Waters Pollution Prevention Act. This committee sets environmental control requirements for industrial operations in Arctic marine waters. All applications for offshore oil and gas exploration permits in Arctic marine waters must be reviewed by this committee which is comprised of federal and territorial officials. AWAC is responsible for coordinating the administration of applicable federal legislation and recommending environmental constraints which are appended to offshore drilling approvals. An applicant may be required to conduct scientific research before, during or after an operation. It is also possible for the committee to review certain mining operations and gas gathering systems, if these involve use of Arctic waters. The committee ensures that there is sufficient contingency planning for oil spill clean-up, disposal of drilling muds, use of chemicals and waste disposal.

REGIONAL SCREENING AND COORDINATING COMMITTEE (RSCC)

This committee is composed of representatives from various DOE and DFO agencies. It ensures that projects within the mandate of DOE are registered and reviewed by appropriate agencies and a coordinated departmental response is provided on proposed developments. It aids other departments in undertaking reviews, coordinates interests and advises as to the magnitude of the problems. Proposals are thus well documented by the time they are submitted to EARP. The Ecological Impact Control branch of EPS supplies secretariat services to the RSCC. The terms of reference of the RSCC are:

- to provide information concerning EARP, to review requests for advice and to provide responses coordinated among the Services of DOE;
- to advise federal government departments and agencies on their EARP responsibilities; to set up the necessary machinery for ensuring that the federal and provincial governments cooperate smoothly and in a coordinated way in EARP matters;

- to be a central point of registry and information on EARP projects;
- to coordinate advice concerning the legislation and regulations that are administered by DOE in relation to projects being considered;
- to ensure that FEARO receives Initial Environmental Evaluations (IEEs), and to provide advice to Panels on proposals that call for Environmental Impact Statements (EISs);
- to coordinate regional contributions to the development of IEEs and EISs;
- to coordinate reviews of EISs and to advise FEARO - to provide up-to-date information on all phases of projects.

CITIZENS GROUPS

CANADIAN ARCTIC RESOURCES COMMITTEE (CARC)

CARC's objectives are "to ensure that the important social and environmental ramifications of northern development are studied and analysed before major decisions relating to northern Canada are made" and "to provide means for exchange of information and viewpoints between people, government and industry."³⁶ Its ongoing activities involve "major resource and land use studies to help both industry and government identify essential problems and avoid unnecessary social and environmental damage" and "intense legal research on northern legislation, regulations and regulatory procedures."³⁷

Among the studies which CARC has funded related to land and water use in the Canadian north have been "Land Management in the Canadian North" and "Water Management in the Canadian North".

³⁶ Environment Source Book, 1978, p. 52.

³⁷ Ibid.

CARC held its first national workshop in 1972 and its second in February 1978. These workshops helped to bring together northern interests, clarify northern issues and provide new perspectives on northern problems. The committee, which is composed of 20 prominent academics, industrialists and citizens has also organized smaller workshops and conferences on specific issues. A special group, the Northern Assessment Group, was organized by CARC to aid witnesses testifying at the Mackenzie Valley Pipeline Inquiry.

CHURCH ORGANIZATIONS

These groups focus mainly on native rights in the north but this concern usually encompasses resource policy issues. "One of the most active groups is the Committee for Justice and Liberty, a Christian public interest group working on energy policy, northern development and native rights issues. The group has made representations to the Mackenzie Valley Pipeline Inquiry, and was an active intervenor in the National Energy Board's northern pipeline hearings."³⁸

In 1975, the Anglican, Lutheran, Mennonite, Presbyterian, Roman Catholic and United Churches formed Project North "to help themselves more effectively address the challenges of native land claims and northern development."³⁹ The group's objectives are:

- to support the creative activities of native people engaged in the struggle for the recognition of their rights and northern development, especially in communicating their struggle to people in the south; and
- to challenge and mobilize the Church constituency (some 15,000,000 or more adherents in the South) and to respond to the ethical and moral issues of northern development.

³⁸ Lucas and Peterson, 1978, p. 79.

³⁹ Project North: The Interchurch Project on Northern Development, (Pamphlet) n.d.

In March 1979, Project North promoted a tour of southern Canada by representatives of northern native groups to widen discussion of native interests and claims.

INTERNATIONAL PROGRAMS

Three international programs are potentially important as mechanisms to protect the environment of the NWT. Two were organized by UNESCO: the World Heritage Convention, and the Man and Biosphere Program. The third, the International Biological Program, is sponsored by the International Council of Scientific Unions (ICSU). The objectives of the three programs overlap.

WORLD HERITAGE CONVENTION

Canada acceded to this convention on July 26, 1976, although it was first put forward by the member nations of UNESCO in 1972, and was ratified by 21 members in 1975. Under the Convention the various states can nominate sites of outstanding international value, whether natural or cultural, for inclusion on the World Heritage list. Once named, the member nations take full responsibility for protecting the sites. These sites will usually be protected by existing reserve systems eg. National Parks. The convention also provides for the establishment of a 15-member committee of experts to be responsible for attaining the following objectives: compilation of a World Heritage list, establishment of a World Heritage Fund (to provide aid to member states), the provision of technical assistance and the promotion of the importance of heritage conservation. One of the first Canadian sites to be listed under the World Heritage Convention was Nahanni National Park in the southeast NWT.

MAN AND BIOSPHERE PROGRAM (MAB)

The International Coordinating Council for MAB, a program directed by UNESCO, met for the first time in November 1971. Part of the program is directed toward establishing Biosphere Reserves which are to be used for conservation purposes and toward providing for ecological research and education. The reserves are to be representative of the major biomes of the world and their subdivisions, or unique areas of special importance for conservation. Landscapes modified by man may be included in the network. The biosphere reserve is:

A dual purpose protected area providing for a non-manipulative baseline or core zone in tandem with zones in which manipulative research and man-area would generally not be open to visits except under controlled circumstances. Other zones or portions of biosphere reserves would be available for a large variety of uses.⁴⁰

MAB reserves can be protected by special arrangements or under existing conservation systems. The MAB office was, until March 1979, housed in DOE but responsibility for Canada MAB now rests with the Association of Canadian Universities for Northern Studies. In 1975, four proposals for ecological reserves in the NWT were approved by DOE and passed to DIAND for consideration. These were: an area from Wood Buffalo National Park to the southern border of Great Slave Lake, Bathurst Inlet and the Queen Maud Uplands, Foxe Basin, and the Foshien Peninsula. These proposals are yet to be pursued. Although no international work is being conducted by ICSU for MAB, it continues as an ongoing intergovernmental program.

INTERNATIONAL BIOLOGICAL PROGRAM (IBP)⁴¹

The IBP was a 10-year non-governmental program that terminated in 1974. Responsibility for IBP nominated ecological reserves or checklisted

⁴⁰ IUCN, 1978, p. 13.

⁴¹ Based on Redpath, 1979; Nettleship and Smith, 1975; Canadian Committee for the IBP, 1975; R.D. Revel, "The International Biological Program Subarctic and Arctic Regions of Canada", 1978; Interview with C. Bugslag, 1979; "Polar Bear Pass What of its Future", DIAND, Communique 1979.

sites came under the auspices of the National Research Council's Advisory Committee on Ecological Reserves until March 1978, and then under MAB until March 1979. The Panels created by the program continue to function to aid governments in pursuing IBP goals.

The IBP was established to study the biological productivity of the earth's ecosystems and to relate this to human adaptability and welfare. A Canadian Committee for the IBP was struck in 1965. In 1968-69 two Conservation-Terrestrial Panels were created to study prospects for the establishment of ecological reserves north of 60°.

Panel 9 was responsible for the Arctic tundra areas and Panel 10 for the Subarctic. Their goals were:

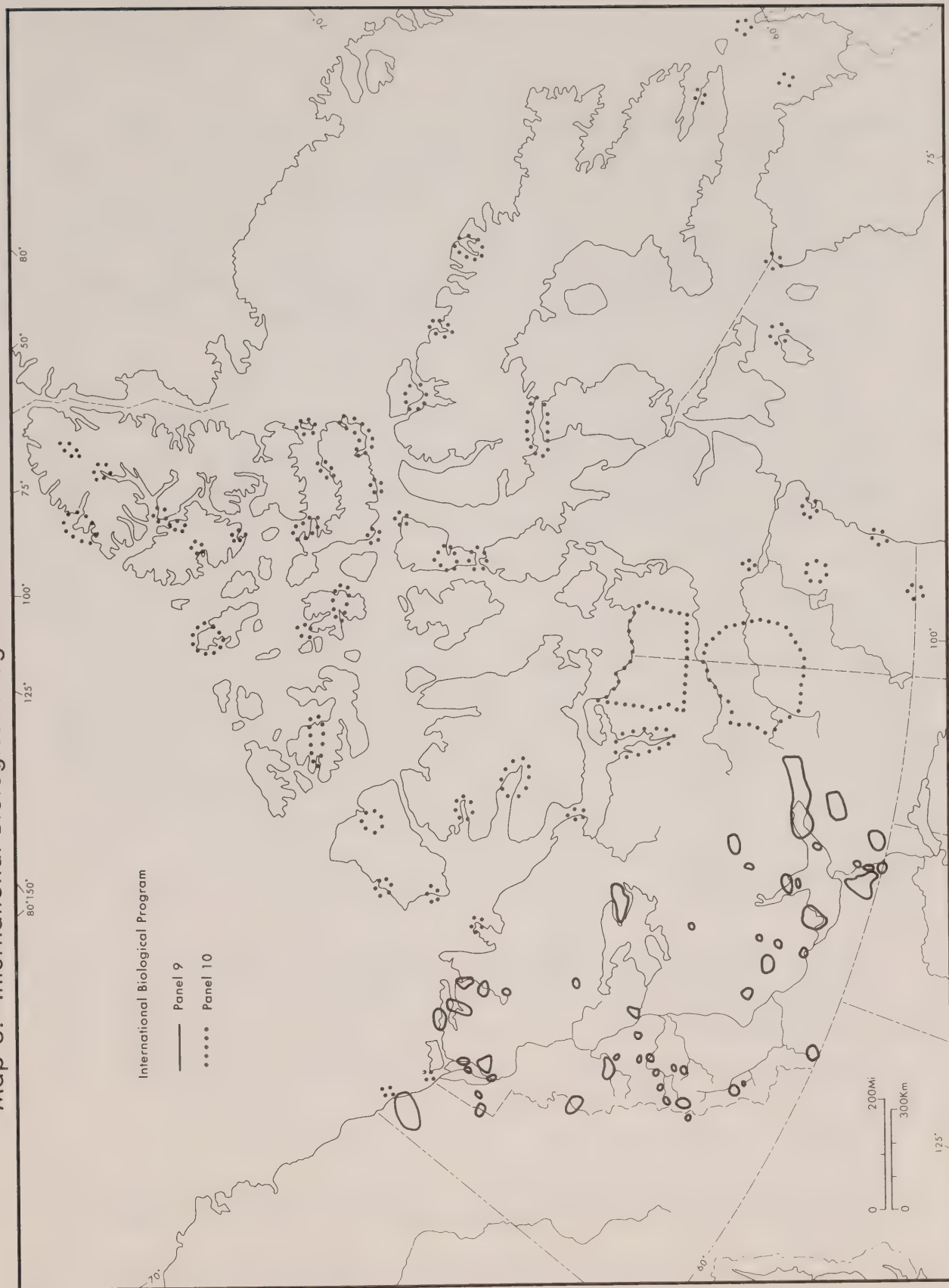
- to locate and describe examples of natural Arctic and Subarctic ecosystems in cooperation with local residents, industry and the federal and territorial governments;
- to demonstrate how the biological values of each potential site may equal or outweigh all other values of that site; and
- to aid the three governments in providing for the preservation of these biologically important areas in the form of Ecological Sites.⁴²

Most of the NWT was the responsibility of Panel 9. The selected potential reserves are shown on Map 6. They include "the seabird nesting cliffs of Prince Leopold Island; the breeding site of the rare Ivory Gull on Seymour Island; calving grounds and range for musk-ox, Bracebridge-Goodsir Inlets, Bathurst Island; waterfowl breeding areas of the McConnell River, Keewatin District; and complete and studied ecosystems such as Cape Sparbo, Devon Island, and Lake Hazen, Ellesmere Island."⁴³

⁴² Nettleship and Smith, 1975, p. 3.

⁴³ Ibid.

Map 6. International Biological Program Sites in the Northwest Territories



DIAND gave approval-in-principle to the concept of ecological sites in the north in January 1975. Native hunting and fishing would be allowed on Ecological Sites and in some cases multiple uses including resource development would be permitted. There is to be no special legislation to establish and administer ecological sites in the NWT, however, some of the identified sites fall within existing reserves such as bird sanctuaries.

Currently, members of the northern Panels are aiding an interdepartmental working committee, formed in 1975, and COPE representatives to screen the 17 proposed sites that fall within the area of the COPE land claim. The interdepartmental working group includes representatives from DOE, DFO, EMR, DIAND and the GNWT. It is chaired by the Director of Northern Environment, DIAND. So far only one site has been designated - the 2 624 km² (1,013 mi.²) Polar Bear Pass IBP site on Bathurst Island. This land was withdrawn under Section 19 of the Territorial Lands Act in February 1978, for a period of two years, during which time public discussion is to focus upon future management plans. The working group is to advise the Minister of DIAND as to appropriate management arrangements.

ENVIRONMENTAL ISSUES

- The effects of proposed large scale industrial development projects, particularly hydro-electric, oil and gas pipelines, offshore oil and gas drilling, mining and highway construction on the environment.
- The effects of transport, storage and disposal of hydrocarbons, chemicals and petroleum products.
- Disposal of solid wastes.
- Effects of industrial development and native harvesting on wildlife populations, for example, the Kaminuriak and Porcupine caribou herds.

VII. AGRICULTURE

PRESENT STATUS

In terms of production value and land occupation, agriculture is a minor component of the maturing NWT economy. Its growth as an industry is hampered by an intemperate climate, a dispersed population, high transportation and labour costs and low yields. According to the 1976 Census, there are only nine farm holdings in the NWT. Of this total, only five farm operations realized crop sales of \$1,200 or more per year. Furthermore, the total area of farm holdings in the NWT declined from 699 ha (1,727 a.) in 1971 to 242 ha (598 a.) in 1976.¹

In light of these statistics, the federal government began to question the economic feasibility of agriculture north of 60°. In January 1975, a federal moratorium on land disposal for agricultural purposes, except market gardening, was announced by the DIAND Minister. This halting of agricultural land dispositions, as discussed more fully in Chapter IV, is intended to provide sufficient time to assess agricultural capability and required information during which the territorial government will develop an agricultural policy. The moratorium on agricultural land was necessitated by the farming setbacks in the north.

Since agriculture is a territorial responsibility², the GNWT Departments of Economic Development and Local Government have been involved in the formulation of an agricultural policy. The policy is currently being drafted for consideration by the Executive Committee. In the interim,

¹ 1976 Census, Statistics Canada, Catalogue 96-800, Bulletin 11-1.

² The Northwest Territories Act, R.S.C. 1970, (S.13 (v)).

DIAND is assisting in a consultative capacity. Future federal land disposals for agricultural land will conform with the wishes of the GNWT. The GNWT wishes to encourage market gardening around major communities, where economic viability is most likely. The federal government supports this policy and provides federal Crown land for this purpose only when Commissioner's land is not available. At Hay River, 4.04 ha (10 a.) agricultural lots have been made available in market garden subdivisions supplied by the federal Crown. The Enterprise/Hay River Corridor has the most productive market garden industry in the NWT. Market gardening in the NWT, however, is predominantly a part-time or hobby occupation.

CURRENT AGRICULTURAL PRODUCTION

As can be seen in Table 9, agricultural activity of the NWT is concentrated in potatoe production. Wheat, oats, and tame hay cultivation account for the remaining farm crops. The NWT agricultural investment increased from \$190,000 in 1971 to \$319,785 in 1976 but naturally the NWT is heavily dependent upon imported food-stuffs. The NWT Farmers Association wishes to meet the food requirements of the 20,000 people living in the South Mackenzie - Great Slave Lake Area. With increased emphasis on market gardens it is likely that NWT farmers will supply more produce to NWT residents.

AGRICULTURAL RESEARCH PROGRAMS

As mentioned earlier, the need for studies concerning agricultural feasibility was given as one of the reasons for halting land dispositions vis-a-vis agriculture. During the moratorium period, DIAND and Agriculture Canada have been involved in agricultural capability studies.

In particular, Agriculture Canada's Land Resource Research Institute, on behalf of DIAND, has completed an extensive soil survey of the Liard River Valley, Hay River Valley, Slave River Lowlands and the Upper Mackenzie River region. Fieldwork was conducted from 1976 to 1978, and to date 12 soil maps have been produced. In the areas surveyed, just over 2 million ha (5 million a.) of land have been deemed capable of supporting some type of agricultural crop. More specifically, 10% of the land area was judged to be suitable for sustained arable agriculture, whereas 70% of the land surveyed was considered marginal and suitable only for permanent pasture (native grazing) or hay production. "Agricultural capability" in this survey referred solely to the physical capability of the land to produce crops, and did not take into consideration economic feasibility or potential yield.³

Basically, the survey designated the land into soil classes for agricultural capability, as developed by the Canada Land Inventory.⁴ The soil classes are as follows:

- Class 1: Soils in this class have no significant limitations in use for crops.
- Class 2: Soils in this class have moderate limitations that restrict the range of crops or require moderate conservation practices.
- Class 3: Soils in this class have moderately severe limitations that restrict the range of crops or require special conservation practices.
- Class 4: Soils in this class have severe limitations that restrict the range of crops or require special conservation practices, or both.
- Class 5: Soils in this class have very severe limitations that restrict their capability to producing perennial forage crops, and improvement practices are feasible.

³ Land Management Division, Northern Environment, DIAND, Ottawa.

⁴ Soil class descriptions are taken from Canada Land Inventory, ARDA.

TABLE 9
Current Agricultural Production in the NWT

| Holdings | 1971 | | 1976 | |
|------------------------------------|-----------|------|-----------|------|
| Total number of holdings | 6 | | 9 | |
| Farms with sales exceeding \$1,200 | 3 | | 5 | |
| <u>Crops</u> | ha | a. | ha | a. |
| Wheat total | 0.4 | 0.98 | 3 | 7.4 |
| Oats for grain | 16.0 | 39.5 | 2 | 4.9 |
| Oats cut for fodder | 4.0 | 9.8 | - | - |
| Tame hay | - | - | 1 | 2.4 |
| Other fodder crops | 12.0 | 24.6 | - | - |
| Potatoes | 6.0 | 14.8 | 20 | 49.4 |
| <u>Livestock and Poultry</u> | | | | |
| Cattle (total number) | 90 | | - | |
| Hens and chickens (total number) | 530 | | 333 | |
| <u>Capital</u> | | | | |
| Total capital value | \$190,000 | | \$319,785 | |

Source:

Statistics Canada, 1976 Census, Catalogue 96-800.

Class 6: Soils in this class are capable only of producing perennial forage crops, and improvement practices are not feasible.

Class 7: Soils in this class have no capacity for arable agriculture or permanent pasture.

For the three areas studied, soil capability for agriculture was determined to be at best Class 3, see Table 10. There are no Class 1 or 2 soils in the NWT due to the limiting climatic factor. The highest capability for agriculture was registered for the alluvial and lacustrine soils of the Liard Valley (Class 3). These soils can support barley, oats and market garden crops. Class 4 soils will support crops similar to Class 3 soils, but yield per hectare will be less. Classes 5 and 6, which constitute significant portions of the Slave River Lowlands, are only suitable for grasses and sedges. Hence, grazing may be a possibility in these areas if the problems facing livestock, such as biting flies, disease and predators, can be overcome. Class 7 lands are totally unsuitable for agriculture.⁵

In addition to the soil surveys being sponsored by DIAND, the Northern Research Group of Agriculture Canada is active in northern crop research. The Research Group maintains experimental facilities at Fort Vermillion and Beaverlodge in northern Alberta. The Fort Simpson, NWT research station was closed in 1970. Since 1970, northern agricultural research formerly conducted at Fort Simpson has been undertaken at Beaverlodge. During the past 20 years, the Research Group has examined the suitability of different crops for northern areas. Most recently, in cooperation with DIAND, the Group has been assessing the potential of grasses and sedges in the Slave River Lowlands for agricultural use.

⁵ Land Management Division, Northern Environment, DIAND, Ottawa.

TABLE 10
Soil Capability for Agriculture

| | Liard and Mackenzie River Area | Upper Mackenzie River Area | Slave River Lowlands |
|---------|-----------------------------------|-------------------------------|-------------------------|
| Class 3 | | | |
| (ha) | 293 016 | 448 998 | 178 077 |
| (a.) | 723,749 | 1,109,025 | 439,850 |
| | 23% | 23% | 22% |
| Class 4 | | | |
| (ha) | 148 182 | 22 143 | 26 329 |
| (a.) | 366,009 | 54,693 | 65,032 |
| | 12% | 11% | 3% |
| Class 5 | | | |
| (ha) | 449 352 | 341 863 | 517 792 |
| (a.) | 1,109,899 | 844,401 | 1,278,946 |
| | 36% | 18% | 65% |
| Class 6 | | | |
| (ha) | - | - | 3 434 |
| (a.) | - | - | 8,481 |
| | - | - | 1% |
| Class 7 | | | |
| (ha) | 365 892 | 943 490 | 74 447 |
| (a.) | 903,753 | 2,330,420 | 183,884 |
| | 29% | 48% | 9% |

LAND USE ISSUES RELATED TO AGRICULTURE

- Future agricultural developments will be determined by agricultural policies established by the GNWT.
- The lack of an infrastructure for agriculture militates against a viable agricultural sector in the NWT.

VIII. FORESTRY

About 17%, or 54.6 million ha (135.2 million a.), of the NWT is estimated to be forest land.¹ Under 2.4 million ha (6 million a.), however, is considered to be primary forest land, i.e. located within 86 km (50 mi.) of a designated or major wood conversion centre. The annual harvest is rather modest, normally being between 5 to 6 Million Board Feet. Products include saw-timber, round-wood (which is used as building logs, piling and mine timbers) and fuelwood. The average forest production during the six fiscal years 1970-71 to 1975-76 is shown in Table 11.

TABLE 11
Annual Average Forest Production for the Fiscal Year 1970-1976

| Saw Logs | | Fuelwood | | Round Timber | | Total |
|--------------|---------------------|----------|--------|---------------|--------|--------|
| '000' bd.ft. | Cunits ^a | Cords | Cunits | '000' lin.ft. | Cunits | Cunits |
| 3,970 | 7,941 | 2,210 | 1,845 | 504 | 1,788 | 11,565 |

^a Cunit is a measure of volume and is defined as 100 cubic feet of solid wood.

Forest harvesting is limited by problems of access, transportation, poor timber and a small local market. Most operations provide only supplemental income to employees, for the industry is highly dependent

¹ All statistics unless otherwise stated are taken from NWT Statistical Abstract, 1977.

upon market conditions and the amount of employment offered varies each year. Many operations are portable or semi-portable, and all the main sawmills are in the southern portion of the Mackenzie District. There is one sawmill at Fort Simpson and Fort Resolution and two each at Fort Smith and Hay River. Roundwood operations for construction piling are also undertaken in the lower Mackenzie River area where a mill operates at Grandview.

LEGISLATION

TERRITORIAL TIMBER REGULATIONS

The disposal and administration of timber lands is provided for under the provisions of the Territorial Timber Regulations which were issued pursuant to Sections 13 and 14 of the Territorial Lands Act. Current Regulations were promulgated in 1962 and replaced those that had been issued in 1954. Extensive amendments were made to the Territorial Timber Regulations in late June 1979. These Regulations apply to the cutting and removal of timber on territorial lands which are under the control, management and administration of the Minister of DIAND, i.e. all land in the NWT except Commissioner's lands. In the latter case, timber cutting permits are issued by the GNWT under Sections 29-44 of the Commissioner's Land Regulations.

The Territorial Timber Regulations establish a permit system for the cutting and removal of timber. A permit may be issued to anyone over 18 years of age or to any corporation upon payment of dues as calculated in the Regulations (S.4). The area covered by a permit is determined by the maximum volume of timber which may be obtained in any one year, that is, 15,000 m³ (S.5(1)). A forest officer may refuse to issue a permit where the applicant is in default of the Regulations or is in debt to the Crown pursuant to the Regulations (S.5(2)). Once a permit has been obtained, cutting operations in the area for which the permit was issued must begin within six months of the issuance of the permit (S.6(2)).

Permits may be issued without the payment of a fee to any educational, religious or charitable institution, or any hospital in the territories when the timber is to be cut and removed for the institution's own use (S.7(a)); to any department of the federal government, and any municipality, school district or Commissioner of the NWT if the timber is for their own use (S.7(1)(b)); to a resident of the NWT, an annual volume of firewood not exceeding 90 m³ (stacked) (S.7(1)(c)); to any person to cut or remove timber for the purpose of clearing land where either a Class "A" or "B" permit as defined in the Territorial Land Use Regulations, is not required (S.7(1)(d)). A permit is normally issued for one year or until a specified amount of timber has been cut, whichever is earlier (S.12).

The following persons may cut up to 90 m³ (stacked) of timber for firewood per year without a permit: a person living a nomadic life, a trapper on his trapline; a prospector or person engaged in exploration or scientific pursuits (S.8(a)). A householder may cut two Christmas trees per year without a permit (S.8(b)). The holder of a valid Class "A" or "B" permit, as defined in the Territorial Land Use Regulations, may also cut timber without a permit on condition that all timber is cut in accordance with the terms of the Class "A" or "B" land use permit and remains the property of the Crown to dispose of through auction (S.8(c)(1-3)). A permit issued under the Territorial Timber Regulations does not allow a permittee to construct a building or other structure on the land except with the permission of a forest officer (S.19). Within three months of the expiration of a timber permit, the permittee must dispose of, to the satisfaction of the Regional Manager, all buildings, structures, equipment, debris and timber cut under the timber permit (S.20(a)(1)(a-d)). No one, except with the approval of the Regional manager, is allowed to cut timber within 60 m (200 ft.) of a public road or highwater mark on the shore of a lake (S.21(1)). The Regulations also detail the payment of timber dues and the seizure of unlawfully cut timber.

FOREST PROTECTION ORDINANCE

The forests of the NWT are a federal responsibility and are administered under the Territorial Timber Regulations which are issued under the Territorial Lands Act. Traditionally, however, the NWT Councils have made forest protection their own legislative responsibility.² Thus the Forest Protection Ordinance complements and dovetails with the Territorial Timber Regulations. This Ordinance deals with closed seasons, burning permits, burning of debris during the fire season, appropriate safety and life fighting equipment that is required by forest industrial operations, and provides for assistance by residents in the fighting of forest fires.

GOVERNMENT AGENCIES AND ADMINISTRATION

Forest management is the responsibility of the Forest Resources Division of DIAND's Northern Affairs Program. Policy matters are dealt with in Ottawa but operational aspects are directed from Fort Smith where the Regional Manager of Forest Resources is located. This position reports to the Assistant Director of Renewable Resources in Yellowknife. The field operations of The Forest Resources Program are closely linked to those of the Lands Program. In fact, the field operation is known as the Northwest Lands and Forest Service.

Forest management is delivered through four district offices which are located at Fort Smith, Yellowknife, Inuvik and Fort Simpson. The forested area of the NWT is also divided into 19 Forest Management Units for administrative purposes.

Administration and enforcement of Regulations in the field is performed by Resource Management Officers. These individuals issue and police cutting permits, inspect logging and sawmill operations and often provide technical assistance to the industry.

² North of 60°, The Forests of Northern Canada. p. 7.

Two classes of permit are issued by Resource Management Officers. "Special" permits that do not require payment of dues are issued to individuals and organizations that are identified in Section 7 of the Regulations. "Commercial" permits are issued to all other harvesters. Table 12 indicates the number of timber permits that were issued for the last three fiscal years.

TABLE 12
Timber Permits Issued in the NWT

| Fiscal Year | Special Permit | Commercial Permit | Total |
|-------------|----------------|-------------------|-------|
| 1975-76 | 39 | 59 | 98 |
| 1976-77 | 49 | 42 | 91 |
| 1977-78 | 84 | 48 | 132 |

Source:

Forest Resources Division, Fort Smith, NWT.

Under the NWT Forest Protection Ordinance the Commissioner appoints a Forest Supervisor (S.3) and Forest Officers (S.4). In practice, the Forest Supervisor is the Regional Manager of Forest Resources. RCMP Officers and Game Officers are ex officio Forest Officers (S.4(2)). The Commissioner also appoints appropriate members of the Northern Affairs Program NWT Region as Forest Officers, and may similarly appoint members of the general public. A priest at Colville Lake, for example,

was formerly a Forest Officer and had the responsibility of marshalling and coordinating firefighting resources for his area. Appointment of Forest Officers by the Commissioner is made on the advice of the Forest Supervisor.

FOREST FIRE PROTECTION

Fire has played an important role in shaping the vegetation pattern in the NWT, and controlling this hazard is the responsibility of the Forest Resources Division of DIAND's Northern Affairs Program. This service is delivered through the District Offices of the Northwest Lands and Forest Service and the Fire Centre located in Fort Smith.

Fire management policy in the NWT is based upon a four-level rating system under which the territory is divided into fire control zones.³ Intensive protection is provided within zone one to safeguard life and property in and adjacent to main communities. Intensive protection is also applied within zone two, although, depending on the location of a fire and relative resource values, the options of partial or no control may be exercised by the agency. Zone two is composed of: an average strip 16 km (10 mi.) wide along each side of main road systems and commercial water routes; an average strip 3 km (1.8 mi.) wide along each side of electric power transmission and communication lines; irregular areas containing an average of 13 km² (5 mi.²) around producing mines, lodges and settlements of fewer than 25 people; stands of merchantable timber located within 32 km (14.8 mi.) of roads and navigable water routes and young forest stands on highly productive sites.

³ J.P.G. de Lestard, "Fire Management: Principles of Priority Zoning and Resource Valuation North of 60°", paper presented at the 1978 annual meeting of the Intermountain Fire Research Council, a sub-committee of the Western Forestry and Conservation Association, Edmonton, Alberta. October 31 - November 2, 1978.

Nahanni National Park is rated as priority zone 2, and fire suppression within this area is handled by the Forest Resource Division with costs being recoverable from Parks Canada. Fire suppression within Wood Buffalo National Park is handled solely by Parks Canada.

Priority zone 3 applies to game sanctuaries, critical wildlife habitats, trapping areas that are used as a sole means of livelihood, unique recreation areas, higher quality timber areas, domestic water catchments and areas prone to significant erosion. Zone 4 lands are essentially unprotected and include approximately 70% of the area inside the tree line north of 60°. Most of zone 4 is inaccessible to ground transportation and subject to few man caused fires.

There were 309 forest fires during 1977 of which 286 occurred during the fire season of April 1 to September 3. Of the 309 forest fires, 194 were fought, but they accounted for only 2 915 ha (17,200 a.) or 1% of the total burned area of 299 175 ha (738,972 a.). Of these fires, 37% were caused by lightning while an unusually large 63% resulted from human activity. Table 13 summarizes the agency's response to fires reported during the fire season.

TABLE 13
Fire Management in the NWT, April 1 - September 3, 1977

| Priority Zone | Number of Fires Reported | Number of Fires Fought | % of Fires Fought |
|---------------|--------------------------|------------------------|-------------------|
| 1 | 128 | 118 | 92 |
| 2 | 52 | 48 | 92 |
| 3 | 19 | 8 | 42 |
| 4 | 87 | 5 | 6 |
| Total | 286 | 179 | 63 |

Source:

ANEP File INA-975 - Office of the Special Representative
(Drury Commission).

CURRENT AND FUTURE ACTIVITIES

A forest inventory is being conducted in selected areas. The inventory of the northern half of the Slave Management Unit is now complete, and it is estimated that 96 MMBF of merchantable timber is available in this unit north of 60° 30'. This supply is currently feeding the mill at Fort Resolution which has an annual capacity of approximately 3 MMBF. An annual allowable cut will soon be established for this area, but it is likely to be above sustained yield for much timber in the unit is overmature.

The greatest harvesting potential in the NWT is found in the Liard Valley which is within the Lower Liard Forest Management Unit. Inventory maps based purely on photographic interpretation are now available and these are to be checked in a field survey program during the summers of 1979 and 1980. A Forest Management Plan will be prepared for the area upon completion of the inventory and this will be incorporated into a Regional Development Plan. It appears that a number of wood processing possibilities exist for this area, one being a pulp mill which would require substantial transportation facilities, probably a railroad. Alternatives are sawmills and chip-board mills. Inventory priorities in the 1980s are likely to focus upon two areas, the south side of Great Slave Lake and the Mackenzie Valley between Fort Providence and Fort Simpson.

FORESTRY LAND USE ISSUES

- Environmental effects of harvesting practices.
- Regeneration techniques.
- Sporadic information as to the value, condition and present rate of harvesting of the forest resource.
- Expansion of the fire suppression service to protect newly established outpost camps.

IX. COMMUNITIES, REGIONAL AND ECONOMIC DEVELOPMENT

POPULATION GROWTH

The population of the NWT was 42,619 in 1976, and a recent estimate suggests that it was 46,386 in 1978.¹ The population of the territory has more than doubled since 1961 while the population growth rate for Canada as a whole has averaged about 1.2% per annum. Table 14 illustrates the rural-urban breakdown of the territory's population between 1951-1976.

Projecting population growth rates is tenuous for the NWT as they are compounded by the territory's low population base, uncertain political future and economic dependence upon non-renewable resource exploitation. Market conditions, for example, determine the feasibility of large scale resource developments and this influences labour migration to the NWT from other parts of Canada.

The death rate of northern residents has declined sharply from 20.8 per 1,000 people in 1950 to 5.5 in 1974. The birth rate, however, has remained quite high, declining from 40.6 per 1,000 people in 1950 to 27.8 in 1974. Natural increase of the population has risen from 18.1 per 1,000 people in 1950 to a territorial high of 38.9 in 1964. The current annual rate of natural increase is around 22-25 per 1,000 people.

¹ Local Government in the NWT, report prepared for the Office of the Special Representative (Drury Commission), October 1978.

TABLE 14
Population Distribution in the NWT, 1951-1976

| Year | Urban | Rural | | Total Rural | Total Population |
|------|--------|-------|----------|----------------|---------------------|
| | | Farm | Non-Farm | | |
| 1951 | 2,724 | 28 | 13,252 | 13,280 | 16,004 |
| 1956 | 4,554 | 12 | 14,756 | 14,768 | 19,313 |
| 1961 | 8,938 | 13 | 14,042 | 14,060 | 22,998 |
| 1966 | 11,534 | 30 | 17,174 | 17,204 | 28,738 |
| 1971 | 16,830 | 25 | 17,995 | 17,980 | 34,810 |
| 1976 | 21,165 | 10 | 21,436 | 21,445 | 42,619 |

Source:

Census of Canada.

- Because a technique known as random rounding was used (whereby the last digit was rounded off to 0 or 5) for distributions such as this, the sum of the individual categories in the rows do not equal the population of the NWT.
- The 1976 definition of a census farm differs from that used in previous censuses. This should be kept in mind when comparing data.

These figures reflect the involvement of the federal and territorial governments in health care, housing, sanitation, etc., for their activities have increased the life expectancy of northern residents.

The NWT, unlike the rest of Canada, is not a highly urbanized region.² Its urban population has increased dramatically during the last 20 years

² An urban settlement as defined by Statistics Canada contains over 1,000 inhabitants, a rural settlement contains under 1,000 inhabitants. This distinction is adequate for southern Canada but is not very meaningful for the NWT.

but this has been accompanied by a significant increase in the rural population, so much so that in 1976 each sector accounted for about 50% of the total territorial population. The urban population has increased absolutely and relatively, while the rural population has increased absolutely but has declined in relation to the total population. Population density in the NWT is extremely low. Based on a land area of 3 379 684 km² (1,304,903 mi.²) and a 1978 population of 46,386 the density is 0.13 persons per km² (0.03 persons per mi.²).

POPULATION DISTRIBUTION

The population distribution of the NWT is quite distinctive for urbanization has not yet concentrated people into a few large centres. Over 50% of the population live in communities of under 3,000 people and 45% live in communities of under 1,000 people. Yellowknife, the territorial capital, dominates the urban hierarchy being nearly three times larger than its nearest rival, Hay River, but it accommodates only 21.5% of the territorial population. This contrasts strongly with the Yukon, where Whitehorse accounts for nearly 61.5% of that territory's population. Table 15 summarizes the population distribution within the NWT's 65 communities.

The territory's communities are widely dispersed and are commonly located on rivers, lakes or tidewater. Most communities are found in the Mackenzie Valley, on the shores of Great Slave Lake and the west coast of Hudson Bay. Sixty-four percent of the NWT population (29,752 people) live in the Western Arctic below the tree line, and approximately 75% of these live in Yellowknife, Hay River, Fort Smith, Inuvik, Pine Point and Fort Simpson. This contrasts to the Eastern Arctic where 35% of the population (16,632 people) live, the majority of whom (84%) live in small hamlets, settlements or unorganized communities.

TABLE 15
NWT Population Summary, 1978

| Type of Community | No. of Communities | Total Population | % of NWT Total Population |
|-------------------|-----------------------|---------------------|------------------------------|
| 1. Unorganized | 14 | 1,544 | 3.3 |
| 2. Settlements | 27 | 9,713 | 20.9 |
| 3. Hamlets | 17 | 10,615 | 22.9 |
| 4. Villages | 2 | 3,709 | 8.0 |
| 5. Towns | 4 | 10,836 | 23.4 |
| 6. City | 1 | 9,969 | 21.5 |
| Total | 65 | 46,386 | 100.0 |

Source:

Office of the Special Representative, 1978.

COMMUNITY DEVELOPMENT IN THE NWT

Communities in the north generally fall into one of three categories³: those depending on renewable-resource based activities such as hunting and trapping, with a mostly native population; those relying on government administrative activities; and those developed on a non-renewable resource base such as mining or petroleum. Yellowknife, and to a less extent Hay River, Frobisher Bay and Inuvik have developed due to a variety of these factors. Serving as communication centres has also influenced their development. The importance of government activities to urban development has increased in recent years while renewable resource harvesting as an urbanization factor has decreased.

³ K.P. Beauchamp, Land Management in the Canadian North, 1976.

The traditional forms of community government have been slow to evolve due to the hinderances posed by a small population, shortage of private property and scarcity of industry, all of which have contributed to a weak local tax base. As a result, the territorial government is responsible for many tasks which, in southern Canada, are performed by municipal councils. Zoning, for example, is performed under the Area Development Ordinance in unorganized and semi-organized communities.

Communities are organized in a hierarchical system whereby they receive increased responsibilities for local affairs as they progress through the five levels of local government: settlement, hamlet, village, town and city. There are 14 other unorganized communities that generally contain fewer than 100 people.

UNORGANIZED COMMUNITIES

Unorganized communities have no form of representative government.⁴ Executive, council and civil service responsibilities are vested with a particular territorial government bureaucrat who may be a regional director, an area service officer or a settlement-manager. This individual has the authority to make all decisions on policy: allocating houses; administering per capita grant programs; drawing up the budget for capital, operational and maintenance requirements for the community; coordinating the delivery of settlement services such as garbage collection and water delivery; managing and making allocative decisions in regard to operating and maintaining funds; and hiring all support staff.

Local residents do not take part in the decision-making process, except in an advisory capacity. Even unorganized communities are, however, becoming more aware and politically sophisticated. An advisory committee of local people is often formed when a development area is

⁴ A.R. Zariwny, Development of Local Government in the NWT, 1977.

designated around an unorganized community and, although not provided for under the Municipal Ordinance, current practice by the GNWT is to consult with such groups to ascertain local wishes.

The unorganized communities in the NWT are: Bathurst Inlet, Bay Chimo (including Hope Bay), Detah, Jean Marie River, Kakisa Lake, Nahanni Butte, Nanisivik, Paradise Gardens, Port Radium, Reliance, Trout Lake, Tungsten and outpost camps.⁵

SETTLEMENTS

Settlements are the first level of organized community government in the NWT, although like hamlets, the second level, they are not required to raise any of their operating revenue through taxation. Settlement councils are not incorporated and as a consequence are not required to follow the provisions of either the Municipal, Societies or Planning Ordinances. In practise the decision-making structures and procedures laid down in the Municipal Ordinance are used as a guide, but there is considerable variation among settlements. Settlement councils have primarily an advisory role, although recently more are taking on administrative functions. Community services in settlements are financed by the GNWT and can be operated and/or contracted out by the Settlement council. All Settlement councils receive an annual per capita grant of \$20 per resident to a maximum of \$12,000. This is in reality a training grant to enhance the general well-being of the community.

Settlement employees are GNWT public servants who are seconded to the councils. Settlements in the NWT include: Arctic Red River, Broughton Island, Cambridge Bay, Cape Dorset, Chesterfield Inlet, Coppermine, Enterprise, Fort Good Hope, Fort Liard, Fort McPherson, Fort Norman,

⁵ Local Government in the NWT, report prepared for the Office of the Special Representative (Drury Commission) October 1978.

Fort Providence, Fort Resolution, Gjoa Haven, Grise Fjord, Holman Island, Lac La Martre, Lake Harbour, Norman Wells, Paulatuk, Rae Lakes, Resolute Bay, Sachs Harbour, Snowdrift, Spence Bay and Wrigley.

MUNICIPALITIES

Hamlets, villages, towns and cities are established and incorporated pursuant to the Municipal Ordinance. The Commissioner may by Order establish a municipality if in his opinion it has developed sufficiently so as to warrant participation of its residents in the governing of its local affairs (S.3(1)(a)), or if he has received a petition requesting the establishment of a municipality signed by at least 25 adults who reside in the settlement (S.3(1)(b)).

In the early 1970s it was the policy of the GNWT to actively encourage the movement from settlement to hamlet and this was essentially automatic once a petition was received. The Department of Local Government now focuses on training programs for Settlement councils and staff, and conducts an evaluative process to determine whether the majority of the residents wish to and are ready to assume the additional responsibility that accompanies hamlet status. The criteria established for classifying municipalities (S.4) is as follows:

- City - over 6,000 population and taxable land assessment of over \$3,000 per capita.
- Town - over 1,000 population and taxable land assessment of over \$2,500 per capita.
- Village - over 500 population and is raising or about to raise revenue by taxing the assessed value of land.

The Municipal Ordinance prescribes the size of council for municipalities (S.7(1)). A city or town consists of a mayor and eight councillors, a village of a mayor and seven councillors and a hamlet of eight councillors. The Ordinance also defines the powers accruing to councils

and the procedures that relate to specific functions. Hamlet councils are able to enact by-laws and resolutions, hire their own staff and enter into contracts for the provision of essential services. Hamlets, in fact, represent the main adaptation of the southern model to the northern situation in that they function as incorporated municipalities but are not required to have a property and tax base. Operating budgets and priorities for capital expenditures are jointly planned by the councils and regional GNWT staff. Headquarters staff in Yellowknife have final approval of both budgets and capital expenditures.

There are 18 hamlets in the NWT and they include: Tuktoyaktuk, Rae/-Edzo, Coral Harbour, Fort Franklin, Pangnirtung, Pelly Bay, Aklavik, Pond Inlet, Igloolik, Sanikiluaq, Arctic Bay, Whale Cove, Baker Lake, Eskimo Point, Hall Beach, Repulse Bay, and Clyde River.

Villages, towns and cities can buy and sell property, levy property taxes (S.159), and borrow money for local improvements by raising debentures (S.202). Every municipality has jurisdiction over all highways within its limits (S.161), and may pass by-laws relating to public health (S.174), fire prevention (S.175), construction and maintenance of buildings (S.176), garbage disposal (S.180) and water supply and sewage disposal (S.181). A council may pass by-laws authorizing it to acquire, hold, sell, lease or otherwise dispose of any real or personal property (S.184(a)), but such a by-law in the case of a city or town is only valid if the requisite funds have been included in the detailed expenditure estimate of the municipality for that year (S.184(2)(a)). In the case of a village or hamlet the Commissioner must approve such a by-law (S.184(2)(b)).

All municipalities other than hamlets may pass by-laws authorizing expropriation of land within and for the purposes of the municipality, but no such by-law is effective unless approved by the Commissioner (S.191(2)). Fort Simpson and Frobisher Bay possess village status, and Hay River, Fort Smith, Inuvik and Pine Point are towns, but only Yellowknife, the territorial capital, has attained city status.

THE PLANNING ORDINANCE

The Planning Ordinance was passed in 1974 and is broadly concerned with controlling the subdivision of land and regulating development and construction. Part I of the Ordinance allows a council to prepare a general plan describing the manner in which the development or redevelopment of a municipality may be carried out (S.3). Such a general plan shall be prepared by a qualified planning officer on the basis of surveys of land use, population growth, economic base and municipal needs. It must include a map showing permitted land use classes; proposals as to the content of a zoning by-law; provision of public roadways, services, public buildings, schools, parks and recreation areas; and a schedule setting out the developmental sequence (S.4). Table 16 summarizes the state of general development plans in NWT communities.

A council may adopt a general plan through a by-law but it must give notice of such an intention and hold a public meeting on the issue (S.25(4)). By-laws adopting a general plan and also those adopting development schemes and zoning regulations are subject to approval by the Commissioner who may require deletions, additions or alterations (S.26(1)). Once adopted, a general plan must be reviewed every five years (S.6).

Development schemes may be adopted for the purpose of carrying out a general plan (S.8(1)(a)). Such a scheme may provide for the acquisition, assembly, consolidation, subdivision and sale or lease of lands or buildings that are necessary to carry out the scheme (S.8(2)(a)). Council may reserve land for future acquisition, specify the manner in which any land area is to be used, subdivided or developed and may make land available for residential, commercial, recreational, institutional and industrial uses (S.8(2)(d)). A special section of the Ordinance allows the Commissioner, after consultation with the municipal council of Yellowknife, to set aside areas within this city to carry out a scheme for the development of the capital of the NWT (S.12(1)).

TABLE 16
Status of General Development Plans in Territorial
Communities
(as of December 1978)

| Settlements | |
|--------------------------------------|---|
| Plan Prepared | Cambridge Bay, Coppermine, Eskimo Point, Nanisivik, Norman Wells, Pond Inlet, Rankin Inlet, Resolute Bay, Yellowknife |
| Plan Prepared but Revisions Required | Aklavik, Arctic Bay, Baker Lake, Cape Dorset, Chesterfield Inlet, Clyde River, Fort Franklin, Fort Good Hope, Fort Liard, Fort McPherson, Fort Norman, Fort Providence, Fort Resolution, Gjoa Haven, Holman Island, Pangnirtung, Pelly Bay, Rae/Edzo, Repulse Bay, Sachs Harbour, Snowdrift, Tuktoyaktuk. |
| No Plan Prepared | Bathurst Inlet/Bay Chimo, Broughton Island, Collville Lake, Coral Harbour, Detah, Enterprise, Grise Fjord, Hall Beach, Jean Marie River, Kakisa Lake, Lac La Martre, Paulatuk, Rae Lakes, Saniluaq, Snare Lakes, Spence Bay, Trout Lake, Wrigley, Whale Cove. |

Source:

Department of Town Planning and Lands, GNWT.

Zoning by-laws may be passed to regulate the use and development of land within a municipality (S.14). Such by-laws may regulate construction regarding size, height, use, open space, and the design, character and appearance of buildings (S.16(1)). They may also specify permissible population densities. The erection of buildings on lands which are low-lying, marshy, unstable or subject to flooding may be regulated as to a specified distance from a water body (S.16(d)(1)). Similarly, the distance of buildings from airport facilities may be specified.

A zoning by-law may regulate the excavation or filling in of land, the removal of top soil, changes in the use of a building or land and the adoption of a system of development and building permits (S.19(a)).

Subdivision of land must conform to any existing or proposed general plan, development scheme or zoning by-law (S.38(b)), and no land may be subdivided unless in the opinion of the Director of the Public Service it is suited to the purpose for which it is being subdivided (S.38(a)). The person proposing the subdivision may be required to install services, for example, roadways, sidewalks and culverts. Where a refusal has been given to a request for subdivision no further application regarding that land may be made for six months (S.39(3)), subject to an appeal to the Commissioner (S.40(1)). The Commissioner on an appeal must hold a hearing and may confirm, vary or reverse the previous decision (S.40(5)(a)). Any subdivision must contain a reserve of land to be vested in the municipality for municipal purposes. This reserve may not exceed 10% of the subdivision (S.44(2)).

SPECIAL PURPOSE COMMITTEES

The developmental "state" of northern communities is reflected in the type and functioning of local decision-making structures. In this respect the NWT is more richly endowed than the previous survey of communities may suggest. In the NWT a variety of normally advisory "special purpose committees" are involved in making decisions related to the provision of social and economic services and the protection and use of land or wildlife. Some of the committees flow from individual pieces of territorial legislation, others have been established informally by the GNWT along program lines and some have been federally inspired or sponsored by industry.

At the community level the most important advisory committees are the education advisory committees, hunters and trappers associations,

housing associations and the drug and alcohol committees. These four committees exist in most communities and may be complemented by recreation committees, public health advisory committees and economic development advisory committees. Gjoa Haven, for example, a community of 454 people, has a settlement council and six community committees as well as a board of directors for the local cooperative. These committees liaise directly with the program departments of the GNWT and are not accountable to the community councils.

HUNTERS AND TRAPPERS ASSOCIATIONS

There are 43 Hunters and Trappers Associations (HTAs) in the NWT. All are voluntary associations whose members are usually those people who depend on the harvesting of renewable resources for all or part of their livelihood, that is, anyone eligible to hold a General Hunting Licence. All the HTAs are incorporated bodies with by-laws and constitutions pursuant to the Societies Ordinance. Their advisory functions relate to informing their members about quotas, seasons, legislation, etc. They are also used extensively by the territorial Wildlife Service to obtain local information and opinion on such matters as alterations to the Wildlife Ordinance. HTAs are normally consulted by the senior governments and industry in relation to proposed development or mineral exploration. HTAs administer, that is, distribute, polar bear and musk-ox tags in their respective communities and also order traps and other gear for their members. These associations receive a \$2,000 annual grant from the GNWT and are therefore required to submit a financial statement and minutes of their annual general meetings to the Registrar of Societies.

HOUSING ASSOCIATIONS

There are 46 Housing Associations in the NWT, most of which are composed of tenants of public and low cost housing built by the NWT Housing Corporation. Housing Association memberships are not, however, limited

to tenants of public housing. These Associations are established pursuant to Section 48 of the NWT Housing Corporation Ordinance which states that: "The Commissioner may vest in a housing association such powers, functions and duties as he deems necessary to operate, manage and maintain any housing unit or housing project under an agreement entered into pursuant to this Ordinance." The corporate objectives of the NWT Housing Corporation encourage it to actively support Housing Associations as viable local organizations responsible to the Corporation for the administration and maintenance of housing.

Housing Associations are formed on the basis of local interest and with the encouragement and support of the Corporation. Like HTAs, Housing Associations incorporate under the Societies Ordinance. The administrative functions performed by Housing Associations include calculation of family income which is a prerequisite for determining rent, allocating houses, maintaining houses, ensuring that fuel and water are delivered and that garbage is removed, paying fuel, hydro and water bills and collecting rent. Housing Associations are financially accountable to the NWT Housing Corporation, for this body approves and/or modifies annual budgets and reviews financial statements and minutes of monthly meetings. Housing Associates are not accountable to community councils.

INDIAN BANDS

An Indian is defined under the Indian Act as a person who is registered as an Indian or is entitled to be registered under the Act. A band is a body of Indians for whose use and benefit in common lands have been set apart, or for whom moneys are held by Her Majesty, or who have been declared a band by the Governor-in-Council. There are approximately 7,500 registered Indians living in the communities along the Mackenzie River and they comprise 16 individual bands (see Table 17).

TABLE 17
Indian Bands, NWT

| Band | Population* | Band Councils (Including Chiefs) |
|---------------------|-------------------------------------|--|
| 1. Aklavik | 237 | 3 |
| 2. Arctic Red River | 252 | 5 |
| 3. Dogrib Rae Band | 1,571 | 13 |
| 4. Fitz/Smith | 340 | 6 |
| 5. Fort Franklin | 462 | 5 |
| 6. Fort Good Hope | 427 | 5 |
| 7. Fort Liard | 434 | 5 |
| 8. Fort McPherson | 673 | 5 |
| 9. Fort Norman | 209 | 4 |
| 10. Fort Providence | 584 | 8 |
| 11. Fort Resolution | 341 | 3 |
| 12. Fort Simpson | 705 | 7 |
| 13. Hay River | 273 | 4 |
| 14. Snowdrift | 278 | 3 |
| 15. Wrigley | 200 | 4 |
| 16. Yellowknife "B" | 590 | 5 |
| Total | 7,576 or 16.3% of NWT Population | |

* These figures represent the total number of people in the band and not the population in the particular community. The Fort Liard Band, for example, includes those members living in Fort Liard, Nahanni Butte, Trout Lake and Fort Simpson.

Source:

DIAND, Yellowknife, December 1977 Treaty List.

Each of the bands choose their band councils, consisting of a chief and from 2 to 12 councillors, according to the custom or tradition of the particular band. Some hold annual elections, while others hold elections only when the majority of the band express dissatisfaction with the leadership.

The power and authority of band councils is derived from the Indian Act, particularly Sections 81 and 83. Virtually all the powers specifically detailed in the Indian Act relate to the concept of reserve land.

Councils are empowered to pass by-laws to carry out municipal-type functions such as regulation of traffic and maintenance of roads on a reserve. In the NWT there is only one reserve, the Hay River Indian Reserve, which was established by DIAND in 1974 for the 273 members of the Hay River Band. The other 15 band councils co-exist in the Mackenzie Valley with the municipal councils and community committees that were outlined earlier. This creates confusion as to the roles and relationships between band councils and community councils. At present, band councils represent the views of status Indians to senior government, particularly DIAND, but they have undertaken administrative functions through the use of core funds that are provided by DIAND. Some bands have started to manage job creation projects, alcohol prevention programs and economic development enterprises. They also manage cultural projects, housing projects and the organization of treaty and ceremonial events.

In certain Mackenzie Valley communities the Band and Community Councils have been merged. This has occurred in the primarily native communities of Arctic Red River, Wrigley and Fort Liard. In six others there is an overlap of membership with a number of band councillors also serving as councillors on the community council. Band councils are currently involved in the negotiation of land claims through the Dene Nation.

Core funding provided by DIAND ranges from \$18,500 to \$45,000 per annum, depending upon the size of the band. The band councils are held accountable to DIAND for this funding and are required to submit

an audited statement of expenditures. DIAND provided \$407,000 in core funds to the 16 band councils in 1977-78. Funding for most other projects managed by these councils comes from the Canada Works Program that is operated by the federal Department of Employment and Immigration.

REGIONAL COUNCILS

In recent years there has been a movement toward the establishment of regional government structures. The Baffin Regional Council has been operating for over two years, the Central Arctic Area Council is now in a formative stage and a Western Arctic Regional Municipality has been proposed by COPE.

BAFFIN REGIONAL COUNCIL (BRC)

This Council was initiated in Pangnirtung in April 1977. Each settlement, hamlet and village in the Baffin region is represented by an elected community council member. The four Baffin region members of the NWT Council plus the member who represents Sanikiluaq in Keewatin also sit on the regional council in a non-voting capacity.

The BRC meets twice per year and has a full-time GNWT employee under secondment to staff an office in Frobisher Bay. The Council's role is advisory and representations are made by it to the NWT Council and the GNWT Regional Office for action on community problems. Future roles that it may play include advising on the improvement of government services, priorities of government programs and on alterations in territorial legislation. The Council also sees itself in the future as a body empowered to negotiate with the GNWT on the regional operational and management budget, the acquisition of capital equipment, buildings and facilities and as an agent for functions decentralized from the GNWT. It received \$66,000 from the GNWT in 1978-79 to finance conferences.

THE CENTRAL ARCTIC AREA COUNCIL (CAAC)

Representatives from Spence Bay, Gjoa Haven, Cambridge Bay, Holman Island, Coppermine and Pelly Bay have met periodically to discuss common problems. Formalizing these discussions into a Regional Council framework was rejected in January 1978, but a subcommittee of three members was established to ensure action upon resolutions that were passed during conferences. To date, such resolutions have concerned transportation services, health, education, etc. The CAAC is primarily a lobby group that acts on behalf of its members to attain improvements in local services and local government funding. It received \$45,000 in 1978-79 from the GNWT to finance conferences.

WESTERN ARCTIC REGIONAL MUNICIPALITY (WARM)

In their land claim the Inuvialuit, through COPE, have proposed the establishment of a WARM to include the communities of Paulatuk, Holman Island, Sachs Harbour, Tuktoyaktuk and Aklavik. WARM would have an elected legislature with jurisdiction over game management, education, economic development and police services. A residency requirement of five years has been suggested as a precondition to voting and running for office. WARM would delegate administrative, management and regulatory functions for wildlife to a Game Council, whose members would be representatives from local HTAs. A Natural Resources Research Board would be established and assigned planning and research functions related to wildlife. A Land Use Planning Commission and a Land Use Applications and Review Committee are also proposed as mechanisms to protect and conserve wildlife through management and regulation of land use. These proposals are discussed in Chapter III.

POLITICAL ASPECTS OF COMMUNITY DEVELOPMENT

Community development is closely tied to the growth of political awareness. The latter quality is now well established in the NWT, being one

result of the land claim negotiations and the work conducted by various native groups and the department of local government of the GNWT. The NWT has also experienced significant political development in an institutional sense since the Carrothers Commission reported to the federal government in 1966. Representative and responsible government is continuing to evolve as governmental functions are devolved from the federal to the territorial level. The GNWT has similarly decentralized many functions to its regional offices at Inuvik, Fort Smith, Rankin Inlet and Frobisher Bay and devolved power to the municipalities. The latter now have a combined council membership and staff of over 800 people, and in the 44 settlements and hamlets approximately 90% of both council members and staff are Indian, Inuit and Metis.

Significant changes are still possible in the structure and style of public decision-making in the NWT. Indeed, totally new institutional forms may evolve. Land claim negotiations have been separated from constitutional development by the federal government but it would be a mistake to believe that land claim settlements would not influence future decision-making arrangements. The political future of the NWT may become clearer once the Drury Commission reports its findings in late 1979.

The GNWT has recently mapped out its stand on political development and local government⁶ and has suggested that the emphases must be as follows:

- To develop among local government bodies and people, greater responsibility (economic, social and political) for the efficient management of their communities and delivery of their program and services.
- To relate more closely the level of programs and services in a community to local willingness to contribute toward the cost of those services.

⁶ Local Government Direction for the 1980s. Document T.D. 13-67, Tabled and Approved by the Legislative Assembly of the NWT, February 16, 1979.

- To develop greater flexibility in the local government structure and framework to better recognize:
 - a) Differences among widespread geographic regions.
 - b) Community differences in their goals, priorities and abilities.
 - c) Cultural differences.
 - d) Differences in means of livelihood from community oriented wage employment to seasonal resource harvesting.
 - e) Severe weather and climatic conditions.
- To develop incentives for the effective and efficient delivery of local government programs and services.
- To strengthen local government Councils and to clearly establish the prime importance of the Councils in providing the overall direction and guidance for the well-being of the community.
- To more fully recognize and accommodate the Band Structure in Indian communities, so as to create a body responsible for local government in the Indian communities that has the support of all residents.
- To encourage and facilitate the process of transferring responsibility for programs and services from the GNWT to local government councils.
- To develop an understanding among local government councils that the pace of constitutional development will depend, in part, on their willingness to accept the financial responsibility along with the increased authority.

A series of recommendations accompany these goals. Particularly relevant is the suggestion that settlements and hamlets be recognized through an Incorporated Communities Ordinance, that is, legislation separate to the Municipal Ordinance. This new Ordinance is required to establish certain communities as legal entities to whom responsibilities can be assigned and to allow for the gradual assumption of responsibilities in relation to community priorities. This Ordinance would specify the organization, powers and duties of hamlet and settlement councils. Incorporated settlements would be provided with a clearly defined level of authority and responsibility for services and programs assumed, made

responsible for the staff necessary to carry out programs, provided with equipment and facilities to deliver programs and funded through monthly contributions against an agreed budget.

HOUSING⁷

NWT HOUSING CORPORATION

The NWT Housing Corporation was established pursuant to the 1972 NWT Housing Corporation Ordinance to develop, maintain and manage housing and housing programs in conjunction with municipalities and territorial and federal agencies. It is an agent of the Commissioner, reporting to him and the Territorial Legislative Assembly through an appointed Board of Directors and a Managing Director. The Corporation has five regional offices located at Inuvik, Hay River, Cambridge Bay, Rankin Inlet and Frobisher Bay. Head office is located in Yellowknife. Funding is provided through capital grants from the GNWT and loans from Canada Mortgage and Housing Corporation (CMHC). Nearly \$30 million was provided to the Corporation in 1977, an increase of \$7 million dollars over 1976. The following are among its programs.

RURAL AND REMOTE HOUSING

This is a home ownership program that assists lower income families to purchase or build houses by subsidizing mortgage payments. The applicant must have a monthly income of at least \$800 and be able to assist in the design and construction of the house. The assessed value of the house and land must not exceed \$47,000, of which the applicant may borrow up to 95%. This program was introduced in 1977 and in that year 21 families from four communities took advantage of the scheme. As of December 1978, 34 units had been purchased or built through this program.

⁷ Based on NWT Housing Corporation Annual Report.

SMALL SETTLEMENT HOME ASSISTANCE GRANT

This program encourages families in 22 designated communities to build their own homes from locally available materials. A grant of up to \$10,000 is available for the purchase and transportation of manufactured housing components such as doors, windows, nails, etc. to complete the house. An applicant who has been accepted must obtain title, lease, or approval from the local council to construct a house in a specific location within a community. Under this program in 1977, 36 house packages were delivered to ten communities. As of December 1978, 124 house packages had been delivered under this program. The communities eligible for the program are: Bathurst Inlet/Bay Chimo, Colville Lake, Echo Bay/Port Radium, Enterprise, Fort Liard, Jean Marie River, Kakisa Lake, Lac la Martre, Nahanni Butte, Rae Lakes, Reliance, Rocher River, Trout Lake, Wrigley, Hay River Reserve, Snowdrift, Fort Franklin, Fort Norman, Fort Good Hope, Arctic Red River and Fort McPherson.

SMALL SETTLEMENT SHELTER GRANT

This program is designed to meet the housing needs of families living in designated communities above the treeline when no government subsidized rental housing is available. At present it applies to Bay Chimo and Bathurst Inlet. A grant of \$10,000 is available for the purchase and transportation of a manufactured basic housing package. The applicant, however, must supply the labour to assemble the house. Two housing units have been constructed under this program.

SENIOR CITIZENS ACCOMMODATION

This program provides rental accommodation to senior citizens who are capable of self-care or require only limited care. Accommodation is constructed through an agreement between the Community Council and the NWT Housing Corporation in conjunction with CMHC. Senior citizens' homes are administered and operated on behalf of the GNWT by an

appointed Housing Authority or the Housing Association. The Authority or Association accepts applications and allocates accommodation on the basis of need. As of December 1978, 119 accommodation units had been constructed under this program.

PUBLIC HOUSING PROGRAM

Public housing is constructed in municipalities and settlements through agreements between the Housing Corporation, CMHC and Community Councils. Housing is then released to a housing authority or association for management. As of December 1978, 1,126 public housing units had been constructed through this program.

SINGLE PERSONS ACCOMMODATION

This program is delivered through agreement between the Community Council, CMHC and the Housing Corporation. Capital funding is available through the Housing Corporation in conjunction with loan financing from CMHC. Housing Associations administer this program. As of December 1978, 93 units had been constructed under this program.

INTERIM FINANCING

This program provides temporary financing to members of registered building cooperatives while in the construction phase of a project. Up to 85% of the amount of an approved mortgage to a maximum of \$46,750 is available. So far 24 applications have been approved under this program, the average value of loans being \$45,000.

REHABILITATION AND MAINTENANCE PROGRAM

This program was initiated in 1977 to rehabilitate 60 units of older housing and to bring them up to CMHC standards.

INDUSTRIAL HOUSING

Under this program 45 housing units have been constructed in Pine Point, Hay River and Nanisivik. Housing is provided to apprentices or trainees through this program, which is facilitated by specific agreements between the Housing Corporation and private companies.

NORTHERN TERRITORIES RENTAL PURCHASE HOUSING PROGRAM

This program operated during 1965-1974 initially under the auspices of DIAND, then under the Housing Division of the GNWT Department of Local Government and finally under the NWT Housing Corporation. Although designed solely for Indian and Inuit needs it was extended to all northern residents in 1970. The Housing Corporation, in conjunction with 37 Housing Associations now administers and maintains the 2,431 units that were built under the program.

Table 18 summarizes the number of accommodation units that have been constructed and/or administered through the above programs as of December 1978. Also shown are the five regions that are designated by the Housing Corporation for administrative purposes and an estimate of each region's population.

ECONOMIC DEVELOPMENT⁸

PROJECT OPERATIONS PROGRAM, DEPARTMENT OF ECONOMIC DEVELOPMENT AND TOURISM

Approximately 30 economic development projects are operated in the territory by the Projects and Marketing Division of the GNWT's Department of Economic Development and Tourism. Most of these projects were

⁸ Based on T. Espie, "Operation of Economic Development Projects in the NWT", report prepared for the GNWT, 1978; Special ARDA in the NWT; NWT Special ARDA Program Progress Review, December 31, 1978; Our Northern Heritage, Annual Report of the GNWT, 1978.

TABLE 18

Housing and Accommodation Programs

Summary of Housing Programs and Accommodation Units Constructed/Administered by the NWT Housing Corporation as of December 1978

| Program | Baffin Bay Region | Cambridge Region | Hay River Yellowknife Region | Inuvik Region | Rankin Inlet Region | Total |
|--|-------------------|------------------|------------------------------|---------------|---------------------|--------|
| Northern Territories Rental Purchase Housing Program | 861 | 400 | 308 | 387 | 475 | 2,431 |
| Public Housing | 322 | 155 | 284 | 227 | 138 | 1,126 |
| Senior Citizens Accommodation | 0 | 0 | 78 | 41 | 0 | 119 |
| Industrial Housing | N/A | N/A | N/A | N/A | N/A | 45 |
| Single Persons Accommodation | 0 | 0 | 29 | 64 | 0 | 93 |
| Small Settlements Home Assistance Grant | 0 | 3 | 111 | 10 | 0 | 124 |
| Small Settlements Shelter Grant | 0 | 2 | 0 | 0 | 0 | 2 |
| Rural and Remote Housing | 0 | 0 | 16 | 18 | 0 | 34 |
| Estimated Population (December 1978) | 8,371 | 3,284 | 23,180 | 7,435 | 4,146 | 46,416 |

Source:

Figures provided by NWT Housing Corporation, April 1979.

inherited from the federal government after the GNWT was established in Yellowknife. Many of the projects are small, labour intensive and viable only due to governmental support. This program has three major objectives:

- To provide wage employment in an area of generally high unemployment, particularly for those unable or unwilling to work in the traditional hunting and trapping sector.
- To train northerners in production and managerial skills.
- To train native workers in marketable technical skills and organize work habits.

The projects that are supported under this program may be divided into four categories.

1. Social Service Projects

These projects provide essential social services in their host communities. Included in this category are small retail stores at Nahanni, Bay Chimo and Rae Lakes and the laundry at Frobisher Bay.

2. Fisheries Projects

The domestic fishery provides a useful source of protein to northerners and supports a limited number of sports fishing lodges. There is also a commercial fishery which in many settlements provides six to eight weeks employment per year. The catch is stored in reefers which are owned by the GNWT, the operation of which is partly covered by a poundage fee that is charged to fishermen. These operations are discussed further in Chapter XII.

3. Arts and Crafts Projects

Most of these projects are small scale and provide a source of needed raw material, for example, thread, duffel, braid, etc., to local craft workers who usually conduct operations at home. Projects of this type are presently being conducted at Fort Rae, Fort Resolution, Snowdrift, Eskimo Point and Rankin Inlet. These projects are unlikely to become economically self-sufficient,

although the Inuvik Craft Shop has been successfully transferred to private ownership. Fur garment operations at Aklavik and Tuktoyaktuk were transferred from GNWT control to local cooperatives but subsequent financial problems led to renewed GNWT involvement.

4. Manufacturing and Processing

There is a great variation in size and type of projects included in this category. However, all are non-seasonal, year-round operations that provide employment in a workshop rather than a cottage setting. Among those included are: the Inuvik Sewing Centre, the Eskimo Point Boat Building project, the Fort Macpherson Canvas Plant, the Eskimo Jewellery Project at Frobisher Bay and the Hay River Furniture Plant.

The total cost of operating this program, according to 1977-78 estimates, is \$5,785,000. A total of 247 jobs were provided under this program in 1977-78.

NWT SPECIAL ARDA PROGRAM

This is a joint federal-territorial program developed to provide NWT residents, particularly those of Indian or Inuit ancestry, with financial assistance to improve their economic conditions. The program was established on June 16, 1977, with the signing of the Canada-NWT Special Rural Development Agreement. It is delivered by the federal Department of Regional Economic Expansion (DREE) and the GNWT in cooperation with representatives from native organizations and local business communities. The types of projects which can be assisted are:

- Projects involving the establishment, acquisition, expansion and modernization of any businesses which provide jobs for people of Indian or Inuit ancestry. Businesses of all types are eligible, including manufacturing, processing and service industries.
- Projects started by groups or associations which will improve the incomes of people of Indian or Inuit ancestry engaged in fishing, forestry, trapping and agricultural activities.
- Projects that involve counselling, training or special social services, not available under other federal or territorial programs which are needed to help people of Indian or Inuit ancestry take advantage of job opportunities.

Assistance is normally provided in the form of a cash grant to the project initiator. Businesses, for example, can obtain incentive grants which may provide up to 50% of the capital required for a project. The grant can also include funds for training and other services.

Project proposals are normally developed through a consultative process between the applicant and regional staff of the GNWT Department of Economic Development and Tourism. Applications that involve primary production are handled by the territorial Wildlife Service. Proposals are reviewed by a committee that advises both levels of government as to appropriate action. This committee is composed of eight delegates: two nominated by the federal government, two by the territorial government, one from the NWT Chamber of Commerce and one from each of the four native organizations in the NWT. The Dene nation has not nominated a representative, consequently an Indian delegate at large has been nominated by the two governments to maintain 50% native participation on the committee.

As of December 31, 1978, a total of 121 applications for financing had been reviewed and 61 offers had been made for a total financial commitment of about \$2 million. Sixty-seven man years of unemployment and 849 people have been assisted through the non-commercial aspects of the program. Table 19 provides a summary of activities conducted under the program.

Of the 61 offers of financial assistance, 55 have been accepted. Among these projects are: establishment of a trading post at Pangnirtung, a warehouse at Rankin Inlet and a small hotel at Holman. It is expected that the number of applications for financial assistance will increase dramatically in 1979, particularly in the area of primary producing activities.

GENERAL DEVELOPMENT AGREEMENT (GDA)

On April 4, 1979, the Minister of DIAND announced the first five-year General Development Agreement between the governments of Canada and the NWT.

TABLE 19
 NWT Special ARDA Program Statistical Summary
 December 31, 1978

| | Applications Received | Offers Made | Applications Withdrawn or Rejected | Applications in Progress |
|-----------------------------------|--------------------------|----------------|--|-----------------------------|
| Commercial | 82 | | | |
| Primarily Producing Activities | 28 | | | |
| Social Adjustment Measures | 11 | | | |
| Total | 121 | 61 | 42 | 18 |
| Baffin Region | 18 | 11 | | |
| Keewatin Region | 17 | 7 | | |
| Inuvik Region | 21 | 9 | | |
| Fort Smith Region | | | | |
| Yellowknife | 16 | 9 | | |
| Other | 49 | 25 | | |
| Total | 121 | 61 | | |
| Applicant Indian or Metis | 50 | 22 | | |
| Inuit | 50 | 31 | | |
| Other | 21 | 8 | | |
| Total | 121 | 61 | | |

Source:

NWT Special ARDA Program Progress Review, December 31, 1978.

The GDA is designed to expedite federal-territorial cooperation in the planning and implementation of economic and social development initiatives. Major objectives are to develop a strategy for socio-economic expansion and diversification, to provide for increased public involvement in economic development in the NWT and to pursue balanced development.

The first "action agreement" under the GDA was also signed on April 4. This subsidiary agreement focusses upon community economic development and is operative until March 1981. Five programs are planned under this subsidiary agreement and each will be cost shared at a ratio of 60% federal and 40% territorial. These programs are:

1. Tourism - \$0.6 million

Expansion in promotional activities and improvement in facilities in various communities throughout the Northwest Territories.

2. Renewable Resource Development - \$2.25 million

Organization of intersettlement trade, promotion and quality control in furs, inventorying, feasibility studies for establishing commercial fisheries, wildlife harvesting studies and forest inventorying.

3. Job Rotation - Pilot Project - \$0.1 million

Provide support for pilot projects for moving native people from communities to mining operations.

4. Community Based Planning - \$0.6 million

Developing three pilot planning structures and training programs, information distribution, capital expenditures for community facilities.

5. Economic Development Strategy - \$0.2 million

Resources for developing a comprehensive assessment of the Northwest Territories economy and developing a long-term strategy.

LAND USE ISSUES

Issues associated with communities and economic development are:

- No overall economic development strategy for the NWT, although this is now being addressed through the General Development Agreement.
- The difficulty of assembling land for future use by communities.
- The lack of baseline information upon which to develop community development strategies.

X. TOURISM AND RECREATION

TERRITORIAL ADMINISTRATION¹

Tourism in the NWT is the responsibility of Travel Arctic. This organization is part of the Business Services and Tourism Division of the GNWT Department of Economic Development and Tourism. A major study is currently underway to develop a policy for the Department of Economic Development and Tourism. The community economic development agreement signed under the GDA indicates some of the priorities of this department. These priorities are outlined in Chapter IX.

Community recreation programs are delivered by the Recreation Division of the GNWT Department of Natural and Cultural Affairs.

TRAVEL AND OUTDOOR RECREATION ORDINANCE (1965)

This Ordinance "empowers the Commissioner to regulate the use and development of any recreational area by designating it a 'travel development area', or a 'travel restricted area'. In the latter, no one other than a resident is allowed to enter for purposes of outdoor recreation without a permit and a guide. In the former, a permit is required for the construction of a tourist establishment and a licence is required for its operation."² These are issued by the Department of Economic Development and Tourism. It is the policy of the federal government to issue leases to land if it is to be used for tourist establishments.

¹ Based on Advisory Committee on Northern Development, 1978; B. Smale, The Development of Tourism and Its Potential Future in Canada North of 60° with Implications for National Parks and Related Reserves, 1978; interview with Don Prudin, 1979.

² Beauchamp, 1976, pp. 44-45.

Two travel development areas have been set aside - the Great Bear Lake Travel Development Area which includes Great Bear Lake and all land within 40 km (25 mi.) of its shoreline, and the Coronation-Queen Maud Gulf Travel Development Area. The use and orderly development of these areas is provided for under the Travel Development Area Regulations (1965, amended 1968, 1977) which provide for zoning of uses in the development areas. The Outfitters Regulations (1968) provide for licencing and duties of outfitters. The Tourist Establishment Regulations (1969) describe permits, licencing procedures and operating requirements for "any premises or boat, operated for gain or reward that provides sleeping accommodation for travellers or persons engaging in outdoor recreational activities, and includes any campsite providing such accommodation and equipped for the supplying of water or electricity, or the disposal of garbage or sewage."³ These Regulations also exempt guides from licencing procedures. Public Campground and Picnic Area Regulations passed in 1972 were revoked in 1978.

RECREATION

MAPPING⁴

The northern land use mapping project undertaken by the Lands Directorate, DOE, provides recreational information for parts of the

Mackenzie District, as discussed earlier in Chapter VI. The recreation evaluation component of this map series is comprised of three elements:

- a terrain evaluation of outdoor recreation potential of relatively large regions and the identification of specific sites of high recreational potential;

³ Travel and Outdoor Recreation Ordinance 1965 (1st), c.2., S.1.

⁴ Based on Smale, 1978.

- a descriptive paragraph outlining the overall outdoor recreation potential of the map sheet; and
- the identification of specific areas, routes, points, or facilities of recreation interest that are currently being used.⁵

Evaluation of hunting and fishing potential and identification of historic sites are also included.⁶

COTTAGING⁷

In response to increasing demands for cottage lands, a program of cottage lot disposal was created for the territories by DIAND in 1975. "The subdivision development program and associated disposal policies are designed to conserve prime waterfront land, to control haphazard development, to reduce speculation in Crown lands and to improve administrative service to applicants for cottage lands."⁸ The subdivisions are developed in consultation with the GNWT and in some cases public recreational areas may be developed adjacent to and in conjunction with cottage subdivisions to ensure optimum utilization of prime waterfront land.

Lots have been taken up in four subdivisions on lakes in the Yellowknife area which were "selected upon the basis of their natural characteristics and their long term capacity to withstand the demands to be made of them by the influx of summer residents, sports fishermen, boaters, swimmers and picnickers."⁹ These lakes are Prelude Lake, Pontoon Lake, Madeline Lake and Pickerel Lake. Subdivisions on the latter three lakes were opened in 1977-78, which made 27 new lots available. All available lots are now leased.

⁵ Smale, 1978.

⁶ Ibid.

⁷ Based on Redpath, 1978; DIAND, Jan. 10, 1975; Interview with B. Lymburner, 1979; Advisory Committee on Northern Development, 1978.

⁸ DIAND, Jan. 10, 1975, p. 2.

⁹ DIAND, Jan. 10, 1975, p. 3.

The cottage subdivision program is presently static, while inventory work on recreational capacity of lakes is reassessed. It has been found that subdivisions of 50 to 60 lots are unsuited to the north. Accordingly, recent subdivisions have had only 10 to 12 lots.

COMMERCIAL COTTAGES

Section 304.8 of the DIAND Land Administration Manual outlines federal policy with respect to commercial cottage operations. Commercial cottage leasing is discussed in Chapter III.

RECREATION DIVISION PROGRAMS

The Recreation Division of the GNWT Department of Natural and Cultural Affairs administers three programs that have land use implications:

- Community Centre Grant Program,
- Outdoor Facilities Grant Program,
- Indoor Facilities Grant Program.

"Community centres" include community halls, skating arenas, curling rinks, swimming pools and multipurpose recreation complexes. Outdoor recreational facilities are athletic fields, outdoor rinks, playgrounds, fitness trails, cross-country ski trails, tennis courts, parks and changing or warm-up shelters. Grants are made to communities to cover the costs of providing these facilities. The programs are locally initiated and each community must pay 50% of the capital and operational costs. Four agencies of the GNWT must approve the policies of the Recreation Division and give their consent to recreational land uses. These agencies are the Departments of Public Works, Health, Town Planning and Lands, and the Fire Marshall.

RECREATION IN YELLOWKNIFE¹⁰

In 1978, Dallard Runge Consulting Limited completed An Outdoor Recreational Land Use and Activities Survey of Yellowknife Residents for DIAND, in cooperation with the GNWT and the city of Yellowknife. Family group participation and individual participation in outdoor recreational activities was determined and trends were projected. The study observed that: "The rate of participation in outdoor recreational activity of Yellowknife residents is extremely high. These already high activity levels are increasing for virtually all activities and the trend analysis indicated considerable shifts in priorities between activities."¹¹

Each of 24 activities was analysed on the basis of participating persons, total person user days and weekend person user days. The activities are shown in Table 20, ranked according to level of participation in 1977.

TOURISM¹²DIMENSIONS¹³

Table 21 illustrates the growth of tourism, tourist expenditure and the number of tourist establishments in the NWT between 1959-1973. More recent figures are unavailable, but a continuing growth trend

¹⁰ Based on Dallard Runge, 1978.

¹¹ Dallard Runge, 1978, p. iv.

¹² Based on R. Butler, The Development of Tourism in the Canadian North and Implications for the Inuit, 1975; G. Wall and W. Bates, "Visitor Use of Northern National Parks", 1978; Explorers' Guide '79 Smale, 1978; Division of Tourism, 1974; Advisory Committee on Northern Development, 1978.

¹³ Explorers' Guide '79 p. 29.

TABLE 20
 Yellowknife Residents' Outdoor Recreation
 Participation in Activities in 1977

| Rank | Activity | Number of Participants in 1977 | % of Yellowknife Population |
|------|--------------------------|--------------------------------------|-----------------------------------|
| 1 | Fishing | 4,806 | 51.7 |
| 2 | Picnicking | 4,370 | 47.0 |
| 3 | Drive for Pleasure | 4,098 | 44.1 |
| 4 | Tent Camping | 3,032 | 32.6 |
| 5 | Swimming | 2,848 | 30.6 |
| 6 | Nature Study/Sightseeing | 2,729 | 29.4 |
| 7 | Bicycling | 2,643 | 28.4 |
| 8 | Hiking | 2,486 | 26.7 |
| 9 | Snowmobiling | 2,426 | 26.1 |
| 10 | Skating | 2,391 | 25.8 |
| 11 | Motor Boating | 2,289 | 24.6 |
| 12 | Canoeing | 2,260 | 24.3 |
| 13 | Hunting | 1,695 | 18.2 |
| 14 | Cross-Country Skiing | 1,668 | 17.9 |
| 15 | Vehicle Camping | 1,136 | 12.2 |
| 16 | Motor Canoeing | 1,015 | 10.9 |
| 17 | Ice Fishing | 951 | 10.2 |
| 18 | Snowshoeing | 881 | 9.5 |
| 19 | Golfing | 853 | 9.2 |
| 20 | Water Skiing | 745 | 8.0 |
| 21 | Sailing | 455 | 4.9 |
| 22 | Trail Motor Biking | 263 | 2.8 |
| 23 | Downhill Skiing | 218 | 2.3 |
| 24 | Dog Sledding | 159 | 1.7 |

Source:

Adapted from Dallard Runge, 1978.

is probable. In 1973 visitors to the territories numbered 22,000, and today, "more than 25,000 tourists criss-cross the NWT". Visitation has increased steadily from 1959, when only 600 tourists entered the NWT. Tourism is second only to non-renewable resources as a source of income to the NWT. In 1959 more than half of the tourists came from the USA, but by 1973, 80% were Canadian, most of whom hailed from Alberta.

TABLE 21
Growth of Tourism in the NWT, 1959-1973

| Year | Number of Tourists | Tourist Expenditures (\$) | Number of Tourist Establishments* |
|------|--------------------|---------------------------|-----------------------------------|
| 1959 | 600 | 350,000 | 4 |
| 1960 | 1,000 | 450,000 | 8 |
| 1961 | 1,300 | 600,000 | 10 |
| 1962 | 2,200 | 850,000 | 14 |
| 1963 | 3,500 | 1,000,000 | 10 |
| 1964 | 5,000 | 1,300,000 | 14 |
| 1965 | 6,000 | 1,500,000 | 23 |
| 1966 | 6,000 | 2,000,000 | 39 |
| 1967 | 6,500 | 2,100,000 | 51 |
| 1968 | 9,000 | 3,190,000 | 61 |
| 1969 | 12,380 | 4,112,000 | 69 |
| 1970 | 20,650 | 5,163,000 | 72 |
| 1971 | 17,700 | 5,536,000 | 80 |
| 1972 | 20,500 | 5,800,000 | 84 |
| 1973 | 22,000 | 6,000,000 | 98 |

* 1959 to 1964 figures include lodges and outfitters only.
1965 to 1970 figures include lodges, outfitters, hotels and motels.

Source:
Butler, 1975.

ACCOMMODATION AND TRAVEL

Eight territorial communities had hotels in 1968 but this figure had grown to 29 by 1978. In 1973 there were 33 hotels and motels, 37 lodges and 28 outfitters in the NWT. By 1978 there were about 72 lodges and outfitters. Most tourist accommodation is located in the south-west of the territories. In 1974 sport fishing and hunting lodges accommodated 4,500 guests. Most of the outfitters are native people.

About 12,300 tourists entered the NWT by road in 1974. Territorial highways are mainly all-weather gravel roads. Five routes connect the communities around Great Slave Lake and the southern part of the Mackenzie Valley with southern Canada via Alberta Highway 35. Another route, the Dempster Highway, connects Mackenzie Delta Communities with Dawson, Yukon.

Most travel into the NWT is by air. There are regular, direct commercial flights into the NWT from Edmonton, Winnipeg, Montreal and Whitehorse. In 1974 90% of territorial air travel was associated with tourism, but due to recent increases in governmental activities and energy and mineral exploration this figure is probably now much reduced.

ACTIVITIES

Table 22 lists some visitor activities which have been recorded in the NWT. Also indicated are selected "general characteristics" of the participants and their activities and the general location of tourist activities in the NWT.

TABLE 22

Tourist Activities, Characteristics and Primary Locations

| Activity | General Characteristics | Primary Locations |
|----------------------|--|--|
| Hunting | Small groups, isolated, operating from base, week long | Southern fringe |
| Fishing | Small groups, isolated, operating from base, week long | Delta, Arctic Coast |
| Canoeing | Personal parties, mobile, isolated, two weeks or more | Coppermine, Thelon Rivers |
| Wilderness Hiking | Personal parties, mobile, isolated, two weeks or more | Arctic Shore, Thelon Rivers |
| Climbing | Personal parties, operating from base or mobile, isolated, two weeks or more | Baffin Island |
| Marine Cruises | Large groups (80), mobile, self-contained, visiting centres - four weeks | Eastern Waters, Davis Strait, Hudson Bay |
| River Cruises | Medium groups (120), mobile, self-contained base, one week | Mackenzie River to Delta |
| Natural History Tour | Medium groups, mobile, series of bases at centres, two - three weeks | Archipelago, Delta, Arctic Shore |
| General Tours | Medium groups (25), mobile, one or more bases at centres, two - three weeks | Delta, Baffin Island |
| Park Tours | Medium groups (20), one centre, localized area, one week | Baffin Island |
| Business Associated | Individual or tour, centres, maybe mobile, two - three days | Delta, main centres |

Source:

Smale, 1978.

LAND USE ISSUES

Issues associated with tourism and recreation are:

- Delays in meeting the demands for cottage sites due to uncertainties caused by native land claim negotiations and conflicts with other resource uses.
- Development of cottage subdivisions at densities that are environmentally or aesthetically unsound.
- Lack of information concerning the recreational carrying capacity of lakes.
- Lack of information regarding tourist visitations.

XI. PARKS

This chapter will discuss programs administered by Parks Canada, and territorial parks established under the Territorial Parks Ordinance.

PARKS CANADA

POLICIES AND LEGISLATION

Parks Canada's policy is to protect for all time those places which are significant examples of Canada's natural and cultural heritage, and to encourage public understanding, appreciation and enjoyment of this heritage in ways which leave it unimpaired for future generations. The National Parks Act (amended by 1974, c. 11) provides the legislative authority for the designation and management of National Parks. Sections 10 and 11 of the National Parks Act provide the statutory base for the establishment on the recommendation of the Minister of the Environment, of National Historic Parks.

The Historic Sites and Monuments Act of 1953 formally established the Historic Sites and Monuments Board of Canada as an advisory body to the Minister and give the Minister statutory responsibility for developing and implementing a national program commemorating persons, places and events of national historic and prehistoric importance. The Act now provides for a representative on the Board from the NWT.

Policies regarding National Parks and National Historic Sites were prepared and issued in 1964 and 1967 respectively. These policies emphasized protection of natural and historic resources, interpretation, educational activities and methodologies appropriate to plan protected areas. There have been a number of developments since these policies were issued, including a rapid increase in the number of parks and sites. Among new initiatives launched during this period was a proposed

program of "Byways and Special Places",¹ National Landmarks, Wild Rivers, National Marine Parks, Historic Land Trails, Historic Waterways and Scenic and Historic Parkways. Because of these changes and the need to have a statement to guide future initiatives and undertakings, Parks Canada prepared a policy paper for discussion in February 1978. A new Parks Canada policy was released on May 10, 1979.

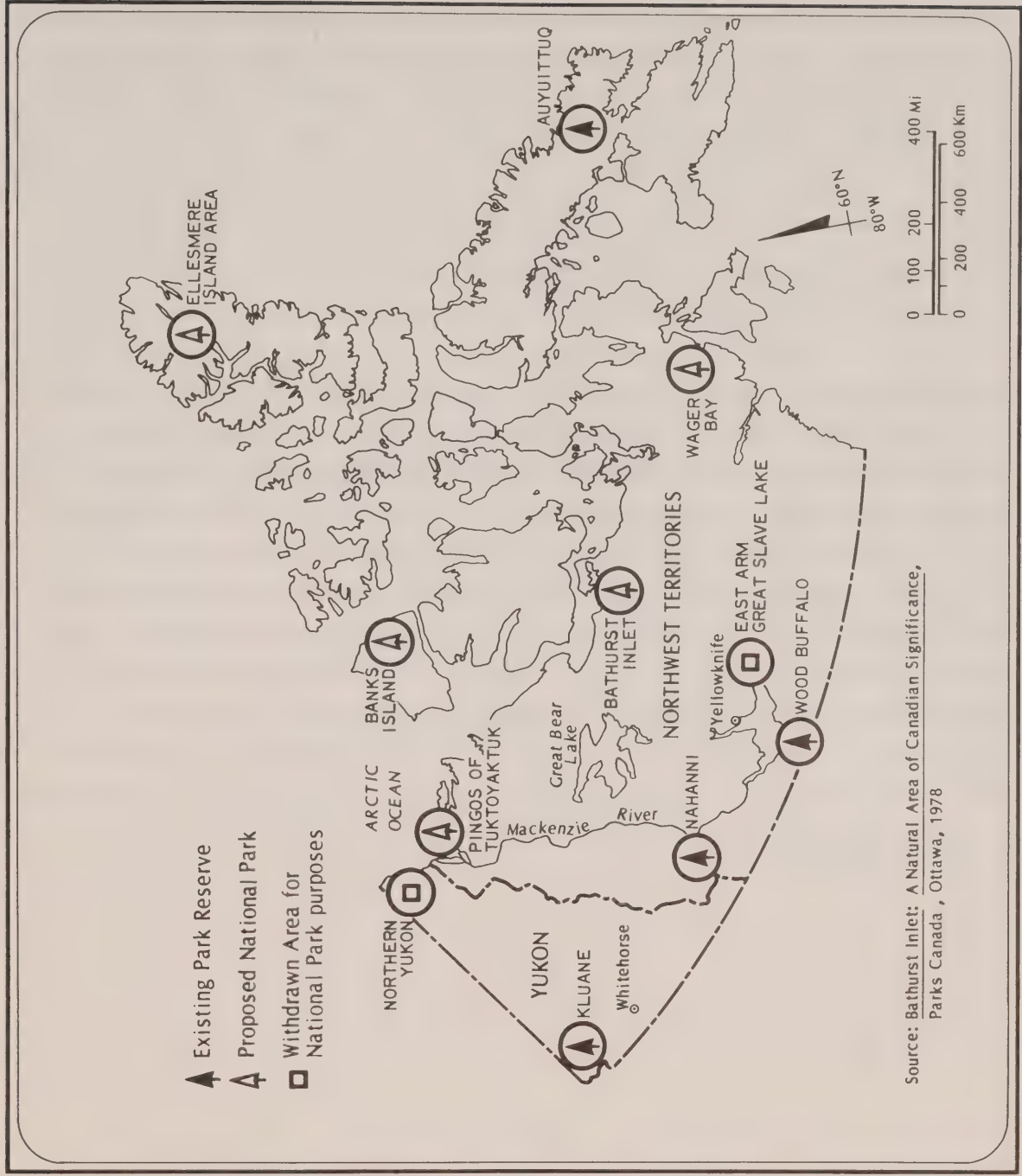
NATIONAL PARKS

The National Parks Branch of Parks Canada manages National Parks to protect the natural heritage and to encourage understanding, appreciation and enjoyment of this heritage by the people of Canada. Under a "system plan" Parks Canada has divided Canada into 48 natural regions: 39 terrestrial and 9 marine. These areas are referred to as "representative natural areas of Canadian significance". Potential National Parks are selected from among the representative natural areas of Canadian significance. The approach is to have each of these natural regions represented in the system of National Parks. Existing and proposed National Parks in the NWT are illustrated in Map 7.

None of the three marine regions in the NWT as yet have representation in the reserve system administered by Parks Canada. Three terrestrial regions - Tundra Hills, Central Tundra Region and Northwestern Boreal Uplands are partially represented by an area reserved for park purposes on Great Slave Lake. Nahanni National Park reserve falls in the Mackenzie Mountains region, Wood Buffalo National Park lies at the southern edge of the Northern Boreal Plains and the Northern Davis Strait region is represented by Auyuittuq National Park reserve. Five terrestrial regions in the NWT are as yet not represented in the Parks Canada system.

¹ This program is now known as Agreements for Recreation and Conservation (ARC).

MAP 7 - National Parks in the Yukon and Northwest Territories



The National Park reserves, Auyuittuq and Nahanni, await the settlement of native land claims for official declaration as National Parks. In the meantime, legislation and regulations under the National Parks Act apply to these areas. The east arm of Great Slave Lake, which was withdrawn in 1971, has yet to be transferred to Parks Canada from the Northern Program of DIAND. This area is not currently managed as park land. A five-year moratorium regarding the proposed park resulted from opposition by the Dogrib Indian band. No action has been taken since this moratorium expired in 1976.

Regulations made pursuant to the National Parks Act that are most relevant to northern parks are the Camping Regulations, Fire Regulations, Fishing Regulations, Game Regulations, General Regulations, Highway Traffic Regulations, and Timber Regulations. Native people are exempt from the National Park Game Regulations, but are subject to the Territorial Wildlife Ordinance in the parks. In Wood Buffalo National Park (which has its own Game Regulations), native people and all residents within 80 km (50 mi.) of the park boundaries, are assigned hunting quotas based on need. The National Parks Act is currently undergoing revision and may be presented to Parliament in the fall of 1979. New proposals for National Historic Parks Regulations pursuant to the National Parks Act have been developed and are now in the final stages of internal review. It is expected that regulations will be in effect in National Historic Parks for the first time in the spring of 1980.

WOOD BUFFALO NATIONAL PARK²

Wood Buffalo was established in 1922 to protect the last 1,500 wood bison in Canada. It was enlarged from 28 700 km² (11,082 mi.²) to 45 000 km² (17,375 mi.²) a few years later in order to include the

² Based on Wall and Bates, 1978; Explorers' Guide, 1979, G. Griffiths, "Wood Buffalo National Park - An Unknown Quantity", 1978.

Peace-Athabasca Delta, which made it the second largest park in the world. Two thirds of the park is in Alberta, but the park headquarters is at Fort Smith, NWT. Most of the park is roadless. It now provides habitat for some 6,000 hybrid plains/wood bison and breeding ground for 85 whooping cranes. The Peace-Athabasca Delta is a prime waterfowl nesting ground in the spring.

Visitor facilities have been developed to a limited extent due to the remoteness of the park. Emphasis is placed upon interpretation of the natural and cultural heritage values and outdoor recreation. A 30-site campground and a group campsite are located at Pine Lake, and wilderness camping is permitted at primitive campgrounds throughout the eastern section of the park. Picnic areas are available at Pine Lake and Salt River and beach facilities are available during the short swimming season from mid-July to mid-August. To facilitate access to the interior, 38.6 km (24 mi.) of hiking trails are provided. Motorboats are only allowed on a portion of Pine Lake by permit and feasibility studies are now being undertaken concerning day and overnight boat tours employing native people and traditional watercraft. Fishing and canoeing are good in some parts of the park and canoes may be rented from the HBC. Camping excursions are conducted during the winter by the park naturalists, and cross-country skiing and snowshoeing are encouraged. Snowmobiling is restricted to trappers and hunters in pursuit of their livelihood.¹³

In 1975, 75% of the 3,916 visitors to Wood Buffalo National Park were from the NWT. A major biophysical inventory of the entire park has been underway for the past five years, as part of the strategy to develop a long-term management plan.⁴

³ Wall and Bates, 1978, p. 13.

⁴ Griffiths, 1978, p. 22.

NAHANNI NATIONAL PARK RESERVE⁵

In 1971, 4 765 km² (1,840 mi.²) in the South Nahanni River area were reserved for National Park purposes. This park is now included on the UNESCO world heritage list due to its international significance. Attractions of the park include the deep Nahanni canyon, the 90 m (295 ft.) high Virginia Falls and wildlife which includes Dall sheep, mountain goat, moose, caribou and many bird species.

A visitor survey conducted by Parks Canada's western region in 1973 made the following conclusion: "Visitor use in Nahanni National Park was low in general, but relatively high at specific points. Virginia Falls was the most popular visiting point. Movement was confined mostly to river travel, with few visitors taking side trips. The greatest proportion of visitors were guided by one predominant out-fitter. The main access route, for both air and water craft, to Nahanni Park appears to start at Fort Simpson."⁶ A number of campsites have been established for use by white water canoeists. Some backcountry hiking trails have been developed.

AUYUITTUQ NATIONAL PARK RESERVE⁷

The spectacular landforms of this 21 470 km² (8,240 mi.²) National Park, which is located on Baffin Island, demonstrate the work of glaciers. Auyuittuq was established in 1972 to represent this type of actively glaciated landscape in the National Park system. Over 40 varieties of birds have been sighted in this National Park including the peregrine falcon and the gyrfalcon.

⁵ Based on NWT, n.d.; Parks Canada, Western Region, 1973.

⁶ Parks Canada, Western Region, 1973, p. 68.

⁷ Based on Explorers' Guide, 1979; Parks Canada, 1973; R. Wilson, The Land That Never Melts: Auyuittuq National Park, 1976.

Headquarters for the park is located in Pangnirtung. Recreationally, Auyuittuq is primarily suited to experienced hikers and mountaineers. There is a campground with 12 tent sites on the Weasel River Delta. Five emergency shelters are located in Pangnirtung Pass and one at the head of Quajon Fiord, 50 km (31 mi.) west of Broughton Island.

PROPOSED NATIONAL PARKS⁸

On January 23, 1978, the Minister of Indian and Northern Affairs announced the beginning of a period of consultation on the feasibility of setting aside six National Areas of Canadian Significance for park purposes in the Arctic. Five of the sites are in the NWT: Bathurst Inlet 12 750 km² (4,923 mi.²), Wager Bay 14 280 km² (5,514 mi.²), Ellesmere and Axel Heiberg Islands 33 660 km² (12,997 mi.²), Banks Island 8 415 km² (3,249 mi.²) and the Pingos near Tuktoyaktuk 12.75 km² (15 mi.²). It was originally intended to designate the first four sites as National Wilderness Parks and the Pingos as a National Landmark. The new Parks Canada Policy has deleted the wilderness park designation, consequently these areas are likely to be established as normal National Parks but given added protection through the Parks Canada zoning system. Traditional native hunting, fishing and trapping are to be permitted in northern National Parks.

Public consultation is continuing with the GNWT, native groups, industry, various conservation organizations and those communities affected by the proposals. Working groups composed of local residents may be set up to study the Bathurst Inlet and Wager Bay proposals. COPE has suggested that local consultation regarding Banks Island and the Pingos be delayed while it forms a steering committee to examine National Parks. The consultation process is relatively simple for the proposed Ellesmere Island Park since the only community likely to be affected is Grise Fiord.

⁸ Based on DIAND, January 13, 1978 and April 14, 1978; National Parks Branch, 1978.

A Parks Canada liaison office has been established in Yellowknife to coordinate the public consultation program. In early 1979 the NWT Council voiced opposition to National Parks in favour of a more use-oriented territorial park system. Since then, Parks Canada has offered technical assistance to the Council so that a territorial parks system plan may be developed. Recently, the Council has indicated its interest in working with Parks Canada to ensure that both territorial and federal objectives regarding parks can be met.

NATIONAL HISTORIC PARKS AND SITES⁹

There are now no National Historic Parks in the NWT, the activity of the National Historic Parks and Sites Branch of Parks Canada has been directed to the erection of plaques commemorating persons, places or events of national historic significance.

Ten such plaques have been erected including: Sir Martin Frobisher at Frobisher Bay, Bush Pilots of Canada at Yellowknife and others at Winter Harbour, Melville Island, Fort Smith, Fort Simpson, Fort Providence, Fort McPherson, Fort Resolution and Port Radium.

AGREEMENTS FOR RECREATION AND CONSERVATION (ARC)¹⁰

The ARC Branch of Parks Canada has a mandate to protect places which are significant examples of Canada's natural and cultural heritage and to encourage public understanding and enjoyment of that heritage through program activities for Heritage Canals, Cooperative Heritage Areas and the proposed Canadian Heritage Waterway program.

⁹ Comments of R. Simond, August 28, 1979; National Historic Parks and Sites Branch, January 1978.

¹⁰ Based on Planning Division, National Parks Branch, July, 1974; ARC Branch Planning Division, n.d.; September 14 and October 11, 1978.

From 1971 to 1973 Parks Canada conducted a Wild River Survey which gathered information on major Canadian wild rivers. The survey provided a basis for analysing and comparing resources and recreational opportunities, and it provided an occasion to formulate goals for the preservation of the best examples of these rivers and their associated lands. Included in the survey were 10 river systems situated in part or in their entirety in the NWT.

A booklet, "Wild Rivers: the Barrenlands (1974)" published by ARC, describes five rivers in the NWT in terms of their geography, flora and fauna, and use for canoe trips.¹¹ These are the Hare Indian River, Snare River, Coppermine River, Hanbury River and the Thelon River.

A three-day Canada-USA Seminar on Northern Wild Rivers was held in Jasper, Alberta, from September 22 to 24, 1978. One of three workshops at the conference examined the Coppermine River. It recommended that rivers within the NWT be managed for their "unusually outstanding natural and wilderness values."¹² A Heritage River System concept emerged from the conference, related to, but somewhat broader than the Wild River System. There would be no transfer of lands in the NWT under this system, and cooperative management frameworks would be negotiated between Parks Canada and the GNWT, particularly the Department of Economic Development and Tourism. Discussions concerning this concept are currently underway.

¹¹ Publication No. QS-7075-000-EEE-A1 in English; QS-7075-00-FF-A1 in French. Available from Printing and Publishing, Supply and Services Canada, Ottawa.

¹² Summary of the Workshops.

TERRITORIAL PARKS¹³

HISTORICAL RESOURCES ORDINANCE

Under the Historical Resources Ordinance, the Commissioner can acquire and set aside historic places and lands and provide for their administration. The Ordinance also "provides for the Commissioner to order persons undertaking a mining, exploration, or industrial operation to ensure that there will be adequate investigation, recording, and salvage of historic or prehistoric objects threatened with destruction".¹⁴ Removal of artifacts and the destruction of archaeological sites is forbidden under the NWT Archaeological Sites Regulations.

TERRITORIAL PARKS ORDINANCE

This Ordinance is currently administered by the park section of the GNWT Department of Economic Development and Tourism.

Four types of parks may be designated under Section 4(6) of the Territorial Parks Ordinance:

- "Natural Environment Recreation Parks," to preserve the natural environment within those parks for the benefit, education and enjoyment of the public;
- "Outdoor Recreation Parks," to provide opportunities for outdoor recreational activities;
- "Community Parks," to provide outdoor recreational activities for the benefit of particular communities; and
- "Wayside Parks," to provide for the enjoyment, convenience and comfort of the traveling public.

¹³ Based on Prudin, February, 1979; Beauchamp, 1976; Territorial Parks Ordinance, 1973 (3rd), (C.5,S.1); Redpath, 1979; J.G. Nelson, Arctic Renewable Resources: Summary and Recommendations, 1976; Advisory Committee on Northern Development, 1978; Explorers' Guide, 1979; Naysmith, 1975.

¹⁴ Beauchamp, 1976, p. 45.

Land required for park purposes may be made available under the Territorial Lands Act. Section 6(1) of the Parks Ordinance provides that "where land has been set aside under an Act of the Parliament of Canada for park purposes, the Commissioner-in-Council may establish a Natural Environment Recreation Park or an Outdoor Recreation Park." Community Parks and Wayside Parks can be established by Commissioner's Order under Section 6(2). Land is "set aside" for park purposes, "but the right to dispose of any surface rights, to use or occupy the surface of the land, to establish, engage in or conduct any business, commercial enterprise or industry remains with the federal government, since the land is still subject to any Act of the Parliament of Canada (S.13)."¹⁵

A Territorial Parks Committee consisting of not less than five members appointed by the Commissioner is established under the Ordinance (S.5(1)) to examine proposals for Territorial Parks and to advise the Commissioner on the establishment and operation of such parks. When examining proposals, the Committee consults with representatives of those persons residing in or near the location of proposed parks who may be affected by their establishment (S.5(3)) and it may hold public hearings on the proposals.

To administer parks, the Commissioner appoints a Superintendent of Parks who may appoint park officers for assistance in the enforcement of the Regulations. "Commercial, industrial, and scientific activities within a Territorial Park may be regulated through the issuance of park use permits, subject to such terms and conditions as prescribed by the Superintendent of Parks."¹⁶ "Although those land use activities provided for under various federal Acts cannot be precluded from Territorial Parks, the Commissioner may make regulations concerning such things as: the use and development of resources in a Territorial Park and the standards to be observed in the conduct of any business in a park."¹⁷

¹⁵ Naysmith, 1975, p. 80.

¹⁶ Beauchamp, 1976, p. 46.

¹⁷ Naysmith, 1975, p. 81.

At present only Community Parks and Wayside Parks, catering to the traveling public, have been established. Nineteen Wayside Parks are now operating. The largest at Reed Lake is 1 052 ha (2,600 a.). Twelve Community Parks have been established, the largest, Sylvia Grinnell, contains 148 ha (366 a.). No Outdoor Recreation or Natural Environment parks have been created by the GNWT.¹⁸ Most parks are located on the Mackenzie Highway system. In total, only 19.4 km² (7.6 mi.²) of land is included in Territorial Parks.

In 1977 there was only a small addition of facilities to Territorial Parks, but the GNWT intends to establish a system of provincial-type user oriented parks. Four new sites for larger Wayside Parks have been identified, but there is currently a freeze on the development of new campgrounds until native land claims have been settled. For reasons of public safety, however, a limited number of campsites may be approved each year along newly constructed roads or along an existing road which may have totally inadequate campgrounds.

DIAND POLICY REGARDING TERRITORIAL PARKS SYSTEM¹⁹

DIAND has not formally adopted a policy regarding the establishment of Territorial Parks but it recognizes the need for such a system. It also recognizes that the territorial governments have key roles to play in the identification and management of areas most suitable for Territorial Parks.

A Territorial Park system will probably be established and operated by the GNWT to meet the demands of local residents, to respond to increased tourism generated by new highways and to promote a tourist industry.

¹⁸ Nelson, 1976, p. 82.

¹⁹ Based on "Land Administration Manual", 1977-78, S. 301.20-301.25.

DIAND has developed a set of guidelines to promote the establishment of a Territorial Park system. These are as follows:

- systems to be complementary to National Parks located in the territories;
- parks to be managed by territorial governments under territorial ordinances;
- administration and control of park lands to remain with DIAND to permit exploitation of renewable and non-renewable resources (multiple use concept);
- designation of park lands to be based on recommendations of a Joint Federal-Territorial Parks Committee;
- traditional rights of native people respected;
- provision made for public participation in the park land selection process.

Federal-Territorial coordination on parks is maintained through a Parks Canada liaison officer based in Yellowknife and at the annual Federal/Provincial Parks Conference.

XII. FISH AND WILDLIFE

The planning and management of fish and wildlife resources in the NWT is shared between the federal and territorial governments. The Fisheries and Marine Service (FMS) of the federal Department of Fisheries and Oceans (DFO) has full responsibility for fish, except for issuance of sport fishing licences which since July 1976, have been dealt with by the territorial Wildlife Service. Responsibility for wildlife rests with the Wildlife Service of the GNWT Department of Natural and Cultural Affairs under the Wildlife Ordinance which on July 18th, 1979, replaced the Game and Fur Export Ordinances. The Canadian Wildlife Service (CWS) of the federal DOE has responsibility for the Migratory Birds Convention Act and the Canada Wildlife Act. In summary, the following legislation mandates fish and wildlife management in the NWT.

Federal:

- The Fisheries Act
- The Migratory Birds Convention Act
- The Canada Wildlife Act

Territorial:

- The Wildlife Ordinance

FISHERIES MANAGEMENT

FISHERIES AND MARINE SERVICE, DFO

The Fishery Management Division of the Fisheries and Marine Service is responsible for the development, operation and maintenance of management programs to control the exploitation of fish and marine mammal populations of all waters of the NWT. This Division is also responsible for the tidal waters of the provinces of Manitoba and Ontario in accordance with the Northwest Territories Fishery Regulations.

The regional office of FMS is located in Winnipeg, but a district office which deals with enforcement of regulations is based in Yellowknife.

There are 12 federal Fisheries Enforcement Officers in the NWT: two in Inuvik, two in Frobisher Bay, four in Hay River and four in Yellowknife. Wildlife Officers of the GNWT Wildlife Service are ex officio Fisheries Officers.

The management priorities for fisheries development in the NWT are based largely upon the 1972 joint federal-territorial Task Force Reports.¹ Conservation requirements are accorded first importance followed by native subsistence needs and finally recreational and commercial requirements. It is general working policy that domestic fish harvesting take precedence over commercial or sports development.

NWT FISHERY REGULATIONS

Fishing in the NWT is controlled through the NWT Fishery Regulations which were passed in 1974 pursuant to Section 34 of the Fisheries Act. These Regulations deal with stream crossings, logging, gravel removal, commercial fishing, domestic fishing and sports fishing. A licence system regulates commercial, sports and domestic fishing. The waters available for commercial fishing are listed in schedule five of the Regulations, which also list quotas on species, closed seasons and the permitted mesh size of fishing nets. The Regional Director of FMS in Winnipeg has the power to establish and alter the length of closed seasons and quotas through a variation order (S.37), while changes relating to the mesh size of nets must be authorized in Ottawa. Inland fisheries are managed on a six year cycle to maintain a sustained yield of the resource. Lakes are closed for five consecutive years and then opened for one year of fishing. The average yield from waters managed in this manner is about 0.22 kg per 0.4 ha (0.5 lb. per a.) per year.

¹ Canada-NWT 1972, Where to Now? Fisheries Development in the NWT, by C.A. Lewis, et. al. A Federal-Territorial Task Force Report.

A free domestic fishing permit may be issued to any Indian, Inuit or person of mixed blood, but a person must be at least one-quarter Indian or Inuit to qualify under the latter category. Such a permit allows the holder to fish for food for himself, his family and his dogs (S.21.(3)), but prohibits the sale of such fish (S.22). A licence for domestic fishing is available for a fee of \$2 to persons who have resided in the NWT for not less than two years (schedule four).

A sports fishing or angling licence costs \$3 for a resident of the NWT and \$10 for a visitor. They are available in most communities from local hardware and sporting goods stores and from virtually all fishing lodges. Sports fishing is regulated through catch and possession limits which have been placed upon 11 popular species. These limits are outlined in schedule six of the Regulations.

COMMERCIAL FISHING²

A number of commercial fisheries have been attempted in the NWT but they have been plagued by inadequate fish stocks, poor product prices, lack of firm markets, little capital and high transportation costs.

Great Slave Lake

The most successful commercial fishing in the NWT is carried out on Great Slave Lake which has an average annual quota of about 1.8 million kg (4 million lbs.) round weight for whitefish and lake trout, the two most popular species. During the 1950s the annual production of these two species averaged 2.9 million kg (6.5 million lbs.), but this has declined due to stock depletion and in 1977 only 1.3 million kg (2.8 million lbs.) was harvested.

² Based on B.F. Friesen, Potential Inuit Benefits from Commercial and Sports Use of Renewable Resources, 1975. R.W. Moshenko, et al., Fisheries and Marine Service Data Report, Number 101, November, 1978.

Great Slave Lake is divided into six administrative areas each with different quotas. The east arm of the lake was closed to commercial fishing in 1974 and is now being managed exclusively for domestic and sport fishing of lake trout. Smaller areas in the vicinities of Fort Resolution, Hay River, Yellowknife and Rae are also closed to commercial activities to promote domestic fishing.

The Freshwater Fish Marketing Corporation (FFMC) operates plants at Hay River, Simpson Islands, Wool Bay and Moraine Bay. At these plants fish are graded, packed on ice and shipped to the main FFMC plant at Hay River where they may be processed and transported via truck to FFMC Edmonton. From here the fish is marketed across Canada and to large metropolitan centres in the USA and Europe. About 8% of the total fish handled by the FFMC originates from the Great Slave Lake fishery. During the summer fishery of 1977, 178 fishermen, comprising both operators and helpers, used 90 boats to produce nearly 1.05 million kg (2.35 million lbs.) of whitefish and trout.

Cambridge Bay

This fishery was established in 1960 and is operated by the Ekaloktotiak Eskimo Cooperative with financial assistance from the GNWT. The fish processing plant is owned by the GNWT but is leased to the cooperative which owns the boats and nets.

Sea run Arctic char is the main commercial species and is caught at the mouths of streams on Victoria Island and the mainland within a radius of about 208 km (130 mi.) of Cambridge Bay. The season lasts about one month during the summer when fish camps are established along the coasts. Fish are flown by small chartered aircraft from the camps to the processing plant at Cambridge Bay where they are cleaned, frozen and mostly shipped to Edmonton for export. The quota for this fishery is approximately 78 750 kg (175,000 lbs.) per annum, which includes small quantities of land-locked char, whitefish and lake trout. This fishery provides about 35 people with one month's employment per year. Due to high freight costs it is a marginal operation.

Pelly Bay

This fishery is also operated by an Inuit Cooperative with considerable governmental assistance. Sea run Arctic char is the main species caught and the quota of approximately 24 750 kg (55,000 lbs.) per annum is generally taken.

Nettilling Lake

This fishery which is near the Koukdjuak River was started experimentally in 1974. The assigned quota is 24 750 kg (55,000 lbs.) of sea run Arctic char. The fish is marketed by the FFMC but is also sold in Frobisher Bay and other communities on Baffin Island. Less than 20 people are employed in this seasonal operation.

Future Commercial Fishing

While operations on Great Slave Lake appear to be quite successful, the fisheries further north are hindered by transportation costs and the great distance to markets. Most fisheries survive through governmental subsidy but nevertheless provide a valuable source of country foods to NWT residents. Greater interest is now being shown in commercial fishing by the Inuit. Consequently a new operation based at Goa Haven is scheduled to start in the summer of 1979 and renewed interest is awakening in Keewatin despite the collapse of the Rankin Inlet fish cannery in 1976.

SPORTS FISHING

The NWT is well known for its sports fishing. Commercial sports fishing operations are normally carried out at two locations. There is usually a main camp which provides lodgings, meals and other amenities, and outpost camps that are generally located on lakes accessible by aircraft.

Section 304.9 of DIAND's Land Administration Manual outlines the policy with regard to these operations. The prospective lessee must obtain the required territorial business licences and building permits. The water frontage of the main camp should not exceed 183 m (600 ft.) and for outpost camps this distance should not exceed 30.5 m (100 ft.).

Greater emphasis is now being placed on sports fishing which can generally yield greater returns to northern residents for each fish harvested than commercial fishing. Table 23 illustrates the number of sports fishing licences issued in the period 1970-1976.

TABLE 23
Sports Fishing Licences Issued in the NWT

| | Type of Licence | | |
|---------|-----------------|--------------------------|--------------|
| | Resident | Canadian Non-Resident | Non-Resident |
| 1970-71 | 1,439 | - | 4,550 |
| 1971-72 | 3,346 | - | 3,238 |
| 1972-73 | 4,772 | - | 3,352 |
| 1973-74 | 5,742 | - | 3,602 |
| 1974-75 | 4,092 | 2,631 | 3,945 |
| 1975-76 | 4,851 | 2,865 | 3,659 |

Sports fishing generally occurs during the summer. The three favourite species are lake trout, Arctic char and Arctic grayling (see Table 24). The 1979 Explorers' Guide lists 46 lodges that cater to sports fishermen. The largest lodges are on Great Bear Lake and Great Slave Lake. These operations depend on the availability of "trophy fish," particularly lake trout, but this species is sensitive to population depletion and requires considerable time to grow to maturity. Heavy sports fishing may easily cause a decline in fish stocks. This is now being reported

by some lodge operators on Great Bear Lake. To combat this, the territorial Department of Economic Development and Tourism has limited the total lodge capacity to one guest bed per 4.1 km (2.5 mi.) of shoreline.

Very little data is available concerning the recreational fishing harvest in the NWT. Table 24 provides an estimate of the annual total poundages caught in the NWT through recreational fishing.

TABLE 24
Recreational Fishing in the NWT

Estimated Population Totals and Total
Poundages Caught by Species

| Species | Population Total | Total Round Weight kg | lb. |
|-----------------|---------------------|--------------------------|-----------|
| Arctic Char | 19,600 | 70 650 | 157,000 |
| Arctic Grayling | 60,700 | 54 630 | 121,400 |
| Lake Trout | 147,600 | 531 495 | 1,181,100 |
| Northern Pike | 89,700 | 322 920 | 717,600 |
| Walleye | 33,600 | 30 285 | 67,300 |
| Whitefish | 13,100 | 17 640 | 39,200 |
| Other | 6,500 | 5 895 | 13,100 |
| All | 370,800 | 1 033 515 | 2,296,700 |

Source:

D. Topolniski, Survey of Recreational Fishing in the NWT,
Department of the Environment, 1974, p. 20.

WILDLIFE MANAGEMENT

WILDLIFE SERVICE, DEPARTMENT OF NATURAL AND CULTURAL AFFAIRS

Section 139(q) of the NWT Act gives the GNWT responsibility to enact Ordinances designed to preserve game. The new Wildlife Ordinance assigns this responsibility to a member of the Executive Committee of the GNWT who may in turn delegate any powers or duties to a Superintendent of Wildlife.

The Wildlife Service has five major goals:

- To maintain productive populations of native mammals, birds and fish in their natural habitats.
- To encourage the wise use of wildlife within the limits of sustained yield to help meet the requirements of residents of the NWT.
- To encourage the conservation of fish and wildlife habitat through coordination and cooperation with environmental management agencies.
- To promote the aesthetic values of fish and wildlife for the enjoyment of all people.
- To encourage the participation of residents in the proper management and use of fish and wildlife resources through education programs and by supporting organizations representing subsistence and recreational users.³

The Wildlife Service is developing written management policies for moose, woodland and barren ground caribou, Peary caribou, Dall sheep, mountain goats, bison, musk-oxen, grizzly bears, polar bears, black bears, wolves, wolverines, fur bearers, small game mammals, upland game birds and raptors. This is a long-term objective but in the short-term the Service advises on the distribution of harvesting, quotas and

³ "Goals, Objectives and Policies of the NWT Fish and Wildlife Service" 1977.

regulations concerning killing techniques. Close liaison is maintained between Wildlife Officers and HTAs which often provide information upon which management plans are developed. HTAs are briefly discussed in Chapter IX. The Service has its headquarters in Yellowknife; three regional offices at Fort Smith, Inuvik and Frobisher Bay; one district office at Rankin Inlet and 25 area offices throughout the NWT.

The Wildlife Ordinance

This Ordinance permits the Wildlife Service to manage wildlife through harvesting quotas, monitoring and research into population dynamics. Wildlife Officers are appointed by the Executive Member (S.4(1)), but all federal Fishery Officers and members of the RCMP are ex officio Wildlife Officers (S.4(3)). Wildlife Guardians may be appointed from persons residing in any region (S.5(1)), however, they are not involved in enforcing regulations but act as a link between the management agency and the individual hunter or trapper. Licences or permits may be issued by any designated person, but only the Superintendent may issue a General Hunting Licence (S.7(4)). This is issued only after a five-year residency qualification is satisfied (S.17(1)), and normally to a person 16 years of age or older (S.18(1)). This Ordinance enables licencing to regulate: general hunting, outfitting, guiding, fur dealing, fur farming, game farming, tanning, taxidermy, trapping, the export or import of live wildlife and hunting of caribou in the Reindeer Grazing Reserve. A permit system is established for export, transport, management and research of wildlife.

The Commissioner may by regulation divide the territory into wildlife management units and designate portions of units as wildlife management zones, sanctuaries, preserves, areas, critical wildlife areas or special areas (S.20(2)). The Commissioner may similarly designate fur management units, make regulations relating to fur bearing animals (S.21) and enter into agreements with the federal government respecting wildlife management, research or habitat (S.27). Existing Regulations under the Game

Ordinance and the Fur Export Ordinance have been used as a starting point upon which to develop Regulations for the Wildlife Ordinance, but the Wildlife Regulations have yet to be made public.

Under Regulations pursuant to the Game Ordinance the NWT is divided into 39 game management zones, 18 musk-ox hunting areas and eight outfitter areas within which hunting and trapping activities for individual species are regulated through quotas and bag limits. Drafts of the Wildlife Regulations indicate that perhaps ten wildlife management units will be designated, primarily to serve the needs of caribou herds. Both calving and grazing areas of herds are to be included within individual management units. "Critical wildlife areas" will include caribou calving regions during the period May 25 to June 15 inclusive.

Three Game Preserves (Peel River, James Bay and Norah Willis Michener) and four Game Sanctuaries (Thelon, Twin Islands, Bowman Bay and Mackenzie Bison) are designated in the Game Ordinance and maintained in the Wildlife Ordinance. A Sanctuary offers a greater level of protection for no hunting is permitted within its boundaries (S.29(1)), while the holder of a general hunting licence may hunt wildlife in a Preserve if it is to be used to feed himself and his dependents (S.30.3)). In a preliminary draft of the Wildlife Regulations hunting is further limited in Preserves for even holders of general hunting licences may not hunt migratory birds during closed season, as well as musk-ox, polar bear and in specific areas, grizzly bear.

RESOURCE HARVESTING PROGRAMS

The Wildlife Service delivers a variety of programs to assist NWT residents who hold general hunting licences and depend on hunting and trapping for a living.

Community Caribou Hunts

Funds are provided through this program to HTAs or Band Councils rather than individual hunters to assist native communities to obtain caribou. Most funding is used to transport hunters to remote locations and to deliver meat back to the communities.

Outpost Camp Program

This program aids families or groups of people, less than 60 in number, to move from settlements to isolated locations so that they may pursue a semi-traditional way of life by harvesting renewable resources. The Wildlife Service prefers HTAs to administer this program. A grant is provided for food, supplies and equipment, but the camp is required to maintain this as a revolving fund from which repayable loans may be made to camp members. Heating fuel is provided at no cost to camps located above the tree line, and assistance is also given to obtain materials to construct minimal housing shelter. Over 40 outpost camps have been established through this program giving about 550 people the opportunity to live a semi-traditional lifestyle.

The location of outpost camps is determined by the distribution and availability of renewable resources, and in most cases camps are in areas traditionally harvested by natives. An evaluation of this program conducted in June 1978 by the Planning and Program Evaluation Division of the GNWT was most favourable in terms of the policy's social and economic benefits. It appears; however, that harvesting activities based at some camps in the Great Bear Lake region may conflict with sports fishing conducted from lodges.

Trappers Assistance Loans

This program provides interest free loans, to a maximum of \$700, to equip and transport trappers.

Trappers Incentive Grants

This program provides trappers with a subsidy to counteract the rising cost of goods and services, and fluctuating fur prices. Grants are pro-rated on the value of the previous year's fur production to a maximum of \$3,000.

Fur Marketing Service

Under this service trappers take pelts to Wildlife Officers who issue an advance of 75% of their estimated value up to a maximum of \$1,000. The pelts are then shipped to a southern auction. The auction returns the initial advance to the GNWT revolving fund and the balance determined by the selling price is forwarded to the trapper.

Radio Communication

The Wildlife Service may supply a transceiver radio to trappers or family trapping camps.

Three minor programs are now rarely used and may be phased out in the future. These are Resource Harvesting Assistance, Domestic Fishing Assistance and Assistance to Fishermen. Monies allocated to these programs may be transferred to HTAs for administration.

NWT GAME ADVISORY COUNCIL

The Commissioner and the Executive Member responsible for game management are directly advised by the NWT Game Advisory Council. This is a citizens group appointed by the Commissioner upon the following basis: two Indian representatives nominated by the status Indian membership of HTAs, one from the lower Mackenzie and one from the upper Mackenzie; two representatives nominated by the NWT Metis

Association, one from the lower Mackenzie and one from the upper Mackenzie; one representative nominated by COPE and three by ITC. These members are responsible to the people of their respective regions and may be removed by their constituents. In addition, the Commissioner designates two additional people, normally representatives of the travel and tourist industry to sit on the Council, bringing its complement to ten. This Council is provided with administrative and research services by the Wildlife Service, (the Superintendent of wildlife is currently its secretary). Although advisory in nature the Council reviews wildlife plans, programs, policies, legislation and administrative procedures. It was heavily involved in drafting the Wildlife Ordinance.

CANADIAN WILDLIFE SERVICE, DOE

The CWS has been active in the NWT for many years. Its role is largely one of research, coordination and advising existing environmental planning and management agencies. Protection and conservation of migratory birds is the agency's main objective, and this is fulfilled by management of migratory bird sanctuaries and involvement in advisory committees, the decisions of which impact upon wildlife and their habitat.

CWS has a field office in Yellowknife where a habitat biologist, an assessment biologist and a technician are employed. One Enforcement Officer is based in Inuvik, however, both RCMP officers and GNWT Wildlife Officers are designated as enforcement officers under the Migratory Birds Convention Act. CWS personnel in the NWT report to the Western and Northern Region of the Environmental Management Service DOE, in Edmonton.

Migratory Birds Convention Act

This Act was passed in 1917 to implement a treaty signed in 1916 by Canada, the USA and Mexico. Migratory Bird Sanctuary Regulations were passed pursuant to this Act in 1974. The Act authorizes the Governor-in-Council to make regulations to protect migratory game birds,

migratory insectivorous birds and migratory nongame birds (S.4(1)), and to control hunting through the establishment of hunting seasons, bag limits and species of birds that may be taken. Migratory Bird Sanctuaries (MBS) have been established through Section (4.(2)) under which hunting and hunting related activities of migratory birds are disallowed in "prescribed areas." Native trapping of species other than migratory birds is permissible in the Sanctuaries, and this occurs mainly during winter.

Land within Migratory Bird Sanctuaries is controlled by DIAND, but CWS has authority over birds and their habitat. Two permits are required to authorize land use activities within Sanctuaries, a standard land use permit and a Migratory Bird Sanctuary (MBS) permit. CWS is represented on the Land Use Advisory Committee but is the only agency concerned with issuance of MBS permits. These are normally dispenses after informal negotiations between the applicant and the chief CWS representative in the NWT. An MBS permit specifies the conditions under which an activity is allowed, for example, the type of equipment that may be used, access routes to the Sanctuary and time limitations on land uses. The MBS permit system attempts to regulate and minimize the damage to migratory birds and their habitat that may result from resource exploration and development. MBS permits are not however, issued for land use activities during the nesting period for geese. Since 1975 about 30-50 MBS permits have been issued per year, but only 15 were issued in 1978. Permits are normally tied to the length of the exploratory or drilling season and are valid for less than one year, but five-year permits are commonly issued for the construction and operation of water gauging stations. There are 16 Migratory Bird Sanctuaries in the NWT. Most were established during the 1950s and 1960s to protect waterfowl colonies, mostly geese and sea birds (see Table 25).

A closed season for hunting migratory birds is in effect between March 10 and September 1 under the International Migratory Birds Convention. The birds, however, are only in the northern portion of

the territories between approximately May 1 and August 30, while nesting usually begins in early June. Traditional native hunting of birds during late May is currently in contravention of the Act and Regulations. Consequently a protocol amending the 1916 convention has been signed to "authorize...the taking of migratory birds and the collection of their eggs by the indigenous inhabitants of the State of Alaska and the Indians and Inuit of Canada for their own nutritional and other essential needs." This protocol allows the federal government to amend the Migratory Birds Convention Act and its attendant Regulations to permit native hunting of migratory birds. Such amendments are now being drafted. Native hunting of migratory birds within Sanctuaries, however, will remain prohibited.

TABLE 25
Migratory Bird Sanctuaries in the NWT

| Sanctuary | Size | |
|--------------------------|--------------------|---------------------|
| | (km ²) | (mi. ²) |
| 1. Akimiski Island | 3 328 | 1,300 |
| 2. Anderson River Delta | 1 070 | 418 |
| 3. Banks Island Number 1 | 20 260 | 7,922 |
| 4. Banks Island Number 2 | 141 | 55 |
| 5. Bylot Island | 10 752 | 4,200 |
| 6. Cape Dorset | 256 | 100 |
| 7. Cape Parry | 2 | 1 |
| 8. Dewey Soper | 8 064 | 3,150 |
| 9. East Bay | 1 152 | 450 |
| 10. Harry Gibbons | 1 472 | 575 |
| 11. Kendall Island | 599 | 234 |
| 12. McConnel River | 325 | 127 |
| 13. Queen Maud | 62 054 | 24,240 |
| 14. Boatswain Bay | 176 | 69 |
| 15. Hannah Bay | 43 | 15 |
| 16. Seymour Island | 5 | 2 |
| Total | 109 716 | 42,858 |

Canada Wildlife Act

The Canada Wildlife Act which was passed in 1973, gives the federal Minister of DOE wide powers and functions relating to wildlife conservation, research and interpretation. The federal cabinet may assign the administration, management and control of any public lands that are required for wildlife research conservation or interpretation to the Minister (S.4(1)). He may subsequently restrict entry onto such lands and specify the purposes for which lands may be used. The Act and its attendant Regulations, which were passed in 1977, is much broader and stronger than the Migratory Birds Convention Act. The Wildlife Area Regulations prohibit any hunting, fishing, trapping, recreational, industrial or commercial activities within National Wildlife Areas (S.3(1)), although the Minister may permit such activities if in his opinion they will not interfere with the conservation of wildlife.

There are no National Wildlife Areas in the NWT, although CWS is currently attempting to establish one in the Campbell Hills south of Inuvik to protect peregrine falcons. CWS is also examining its Migratory Bird Sanctuaries to determine which should receive the added protection that accompanies National Wildlife Area status. This agency also suggests that the calving areas of the Bluenose, Bathurst, Beverley and Kaminuriak caribou herds should be protected through the Canada Wildlife Act.

REINDEER GRAZING RESERVE

Section 47 of the NWT Act authorizes the Governor-in-Council to make regulations "for the control, management, administration and protection of reindeer...whether they are the property of Her Majesty or otherwise." A Reindeer Grazing Reserve of approximately 36 080 km² (18,000 mi.²) was established east and north of the present site of Inuvik by Order-in-Council in 1933. This reserve was designated to protect rangeland for reindeer that were being introduced from Alaska and to regulate reindeer

hunting. The purpose of this exercise was to provide new sources of food and employment to natives. It was not designed to be a profit making enterprise although since 1974 efforts have been made to make it such.

Reindeer Regulations were promulgated in 1954 to enable the Superintendent, that is, a person designated by the Minister, to divide the reserve into grazing allotments (S.3), to authorize a hunting licence system (S.5(1)) and to regulate roundups, markings, strays and grazing activities. An amendment was passed in 1974 enabling the Minister to sell the reindeer to Eskimo or Indian corporations. This was subsequently done. The animals are currently owned by Canada Reindeer Ltd., an Inuit cooperative venture.

Hunting of other species in the Reindeer Grazing Reserve is not subject to the Reindeer Regulations. The reindeer population fluctuates between 5,000 and 9,000 animals.⁴ Between 1935-1969 an estimated 65,000 reindeer fawns were born on the Mackenzie reserve and approximately 29,000 mature animals were slaughtered while natural losses accounted for 30,000 animals. In 1978, reindeer were introduced onto the Belcher Islands in an attempt to expand native employment opportunities.

LAND USE ISSUES

Land use issues associated with fish and wildlife are:

- Effects of large scale industrial projects and piecemeal development on fish and wildlife resources.
- Effects of native hunting, fishing and trapping on wildlife resources.

⁴ B.F. Friesen, Potential Inuit Benefits from Commercial and Sports Use of Arctic Renewable Resources, p. 56.

- Conflicts between different resource uses.
- Paucity of baseline data regarding population levels. Such data are needed if accurate species management plans are to be developed.

XIII. ENERGY RESOURCES, MINING AND QUARRYING¹

DIAND is responsible for the development of programs and policies relating to the management of subsurface rights (oil, gas and mineral resources) in the NWT except for the subsea rights in offshore Hudson Bay and Hudson Strait which are administered by EMR. These activities are regulated through the Public Land Grants Act, the Territorial Lands Act, the Canada Oil and Gas Production and Conservation Act, the Arctic Waters Pollution Prevention Act and the Canada Shipping Act. Quarrying operations on a commissioner's land are controlled by the GNWT under the Territorial Financial Administration Ordinance.

The disposition of surface and subsurface rights of land in the NWT is found in the following legislation:

- Territorial Land Regulations;
- Canada Oil and Gas Land Regulations;
- Canada Mining Regulations;
- Mining Safety Ordinance;
- Territorial Coal Regulations;
- Territorial Quarrying Regulations;
- Financial Administration Ordinance.

¹ Main sources are Beauchamp, Land Management in the Canadian North, 1976; Advisory Committee on Northern Development "Government Activities in the North 1977-78"; Northern Canada Offshore Drilling meeting, December 5-6, 1972; Department of Indian and Northern Affairs, "North of 60° Oil and Gas Activities" 1977; Oil and Gas monthly activities, December 1978.

Safety and prevention of waste are regulated by:

- Canada Oil and Gas Production and Conservation Act,
- Canada Oil and Gas Drilling Regulations.

OIL AND GAS

THE CANADA OIL AND GAS LAND REGULATIONS

These Regulations govern the management, disposition and administration of oil and gas rights in Canada north of 60°. They provide the authority to establish the terms and conditions under which holders of rights may explore and develop for petroleum products, and to collect fees, rentals, royalties and other related revenues. This legislation is applicable to the areas administered by both DIAND and EMR.

For the purpose of disposing of lands for petroleum operations, territorial lands are divided into grid areas which are further divided into sections and units (S.4-9).

An exploration licence gives an individual over 21 years of age, or a corporation registered in the NWT, the right to enter any vacant land to search for oil and gas. Such a licence does not, however, permit entry on occupied lands without the consent of the occupier (S.95), unless an entry order from an arbitrator has been obtained. The licence is valid from the date of issue to the following March 31, upon payment of a \$25 fee (S.24(2)(3)).

Until the Regulations were amended in 1977, exploratory rights for a specific location were granted as permits upon application with the payment of \$250 and a deposit. Exploratory rights for available grid areas are now disposed of through a bidding procedure conducted under invitation by the Minister of DIAND or EMR. The various stages of development are controlled through exploration agreements between government

and industry or through special renewal permits that are applicable to companies whose permits have expired under the old regime. Both exploration agreements and special renewal permits may be converted into leases.

The Minister of DIAND or EMR, depending upon the location of the area publishes a notice in the Canada Gazette and other publications identifying grid areas that are open for negotiation. Petro-Canada is notified 60 days in advance of the publication of a proposal so that it may select up to 25% of the Crown reserve lands subject to its preferential right of acquisition (S.33(5)). Proposals considered to be of limited public interest, those requiring immediate action, or any areas selected by Petro-Canada need not be published in advance (S.30(7)).

An agreement is finalized within 90 days of the closing date for applications, subject to requirements under the Territorial Lands Act and the Arctic Waters Pollution Prevention Act, and terms designated by the Minister (S.30(6)). If no proposals are submitted, the Minister may enter into an agreement concerning that parcel of land with any person within 90 days of the closing date (S.30(6)).

An exploratory agreement establishes the terms and conditions for the payment and disposition of deposits, work programs and drilling requirements, grouping of land orders and surrender or cancellation of rights.

Exploratory agreements are issued for grid areas of up to 25 900 ha (64,000 a.), depending on the latitude of the area (S.33(1)). Agreements are for an initial term of ten years but may be renewed for any number of ten-year periods subject to the terms and conditions made by the Minister (S.31(1)(2)). There is a provision in the Regulations which allows an applicant, upon request to the Oil and Minerals Division of DIAND, to group areas to a total of 1 011 714 ha (2.5 million a.) as long as the areas are contiguous or within a radius of 161 km (100 mi.) (S.49).

This allows expenditures made in any permit area in the group to be applied to any or all of the agreement areas (S.50(1)). Once an exploratory agreement has been signed, a person or company may delineate and drill development wells without limitation as to their depth (S.32(1)(a)).

A person or company may be required to take out a lease if the Oil and Minerals Division feels that the area contains oil or gas in a commercial quantity (S.66). The Minister may publish a declaration of the discovery and a copy of this is sent to persons who have an agreement or existing permit in the area. The Minister has the authority under the Regulations to order the drilling of a well where a significant discovery has been declared (S.124(1)). Should this order be violated the Minister may notify the person or company of action that will be taken if the holder does not comply within 90 days (S.125).

A person or company holding a permit about to expire has the option of maintaining an application for an oil and gas lease; withdrawing the application and receiving the payment of rental funds (S.115(1)(2)(a)); or applying for a special renewal permit. The latter allows the continuation of exploration work under terms outlined in the original permit, with expenditures not exceeding \$1.30 per ha (2.5 a.) (S.115(2(b))). Petro-Canada is given the preferential right to a working interest in a special renewal permit area where no significant discovery has been found or where the level of Canadian participation is below 35% (S.120(3)).

The legislation provides for rules to determine the level of Canadian participation for the purposes of a special renewal permit (S.122). If the rate of Canadian participation in the application is 25% to 35%, a 10% working interest may be granted to Petro-Canada; if the rate of Canadian participation is less than 25%, an additional interest of 1% for every point below 25% (to a maximum of 15%) may also be granted to Petro-Canada (S.120(1)). Should the applicant for a special renewal permit disagree with Petro-Canada's decision to wave or acquire its working interest, the applicant has the right to apply for a lease up to 30 days after Petro-Canada has been given notice of its decision (S.116(2), S.117(2)).

Upon application, the holder of an exploration agreement or the holder of a special renewal permit may convert the permit into an oil and gas lease (S.55(1)). A lease is effective for a 21-year period and may be issued or renewed only if the applicant is a Canadian citizen, a company containing at least 50% Canadian shareholders or whose shares are listed on a recognized stock exchange (S.55(2)).

Leases will be granted for up to one half of the number of sections in the agreement or permit area held by the applicant (S.52(2)), and selected in quadrilateral blocks containing 5 sections by 3 sections or 4 sections by 4 sections. Where selected leases do not contain more than two fifths of the number of sections in the applicant's permit area, lease areas may be composed of quadrilateral blocks of up to 6 sections by 3 sections (S.60).

A lessee must notify DIAND of his intention to commence exploratory work. The notice must indicate the kind of exploratory work that is to be undertaken and specifically the timing, acreage, locations, equipment and number of persons involved (S.52). The lessee must also apply for a land use permit. Permit conditions are established upon the recommendation of the Land Use Advisory Committee following consultation with communities whose interests may be affected. DIAND makes the final decision regarding acceptance or rejection of the application and specifies environmental conditions under the Territorial Land Use Regulations (S.31). An appeal process for the applicant and an affected community is defined in the legislation. DIAND can require a security deposit of \$100,000 from the applicant to ensure compliance with environmental conditions (TLUR S.36(1)).

Once the notice has been accepted and a land use permit has been granted, a lessee may carry out exploratory and development drilling in the leased lands and produce or extract any oil or gas related substance under the Canada Oil and Gas Land Regulations (S.59(1)).

The royalty rates under oil and gas leases are 5% of the market value at the well head or extraction plant for the first three to five years depending on the latitude of the lease, and 10% thereafter (S.86(b)(c)). In addition, the lessees are required to pay a land rental fee of 50 cents per acre per year (S.79(1)). Provisions for the reduction of the land rental under specific circumstances, including production of oil and gas, are found in sections 80-85.

Petro-Canada was given the option to select up to 25% of Crown reserve land for one year following the promulgation of the 1977 amendments to the Regulations. This Crown Corporation was also given the option to select lands in a manner and quantity designated by the Minister for a seven-year period following promulgation of the amendments to the Regulations (S.33(1)(2)(3)).

CANADA OIL AND GAS DRILLING AND PRODUCTION REGULATIONS

The Canada Oil and Gas Production and Conservation Act together with Canada Oil and Gas Drilling and Production Regulations pursuant to the Territorial Lands Act provide for the control of drilling and production operations, the prevention of pollution and the safety of personnel directly involved with well site operations. If drilling is to occur in a new area, the petroleum company usually seeks to obtain an approval-in-principle from DIAND before committing funds to meet environmental and technological standards. The Arctic Waters Advisory Committee (AWAC), which consists of representatives from the Oil and Gas Division and the Land and Water Division of DIAND, review the technical and environmental feasibility of the proposal. Transport Canada and the Departments of the Environment and Fisheries and Oceans are also consulted. The Committee usually visits settlements that could be affected by exploration or development activities and holds public meetings in order to find out what environmental restrictions the local people feel are necessary. Terms and conditions are defined by the AWAC before drilling authorization is granted. In addition, a company must apply for a water

authorization pursuant to the Northern Inland Waters Act. Authorizations are issued by the Minister of DIAND upon the recommendations of the NWT Water Board.

CANADA OIL AND GAS DRILLING REGULATIONS

These Regulations pursuant to the Canada Oil and Gas Production and Conservation Act were promulgated in January 1979. They pertain to the drilling of onshore and offshore wells.

CANADA OIL AND GAS PRODUCTION AND CONSERVATION ACT

The Canada Oil and Gas Production and Conservation Act governs the operational aspects of the petroleum program at the drill site. The Act may also be used to prevent pollution of air, land or water (S.12q). The Arctic Waters Advisory Committee oversees all aspects of the petroleum development program including drilling, production, processing, transportation, conservation, safety, storage, distribution, measurement, handling and abandonment of oil and gas operations (S.12).

PROPOSED LEGISLATION

PETROLEUM AND NATURAL GAS ACT AND NEW CANADA OIL AND GAS LAND REGULATIONS - BILL C-20

Subsequent to a policy statement issued in May 1976, and in accordance with the 1976 national energy strategy, Bill C-20 was tabled in Parliament in December 1977, but was not continued following dissolution in 1978. The proposed legislation would replace the Canada Oil and Gas Regulations but would retain those features of the Regulations not inconsistent with the proposed legislation. The new legislation is designed to stimulate the pace of exploration in order to assess and increase the level of oil and gas reserves. Bill C-20 defines new oil and gas management rules that will replace the former exploratory licences. The proposed

The proposed legislation provides fiscal and land holding incentives, as well as, increased governmental control over the timing, direction, rate and level of exploration, and development and production activities.

The proposed legislation includes greater work obligations, shorter confidential periods for reports on exploration projects, and increased authority for the Minister to order the drilling of wells, the commencement of production and the stipulation of posted product prices. Land rental will be increased to \$6 per ha (\$2.50 per a.) at the provisional lease stage. A basic royalty of 10% of the well head value will replace the existing 5% and 10% formula. In addition to an increase in rental and royalty rates, a progressive incremental royalty of 40% will be levied on production revenues after specified deductions. A three-year progressive incremental royalty holiday has been provided on all discoveries made prior to October 31, 1982.

A Canadian participation rate of 25% is required for all corporations granted rights in Canadian lands. There is also provision for equitable use of Canadian goods and services for work performed in Canadian lands.

Section 19 of Bill C-20 establishes an "Environmental Studies Revolving Fund" under the jurisdiction of the Ministers of DIAND and EMR. The maximum value of the fund would be \$15 million. Payment into the fund would be made by any person holding an interest or right under the former Regulations or the proposed Act. The fund will be used for environmental studies that are deemed necessary to determine appropriate issuance of interest or right in respect of exploration for oil or gas. As a transitional measure, holders of existing permits and leases will be allowed to convert their right to a provisional lease containing the whole or part of the entire permit area, or acquire a "Special Renewal Permit".

CANADA OIL AND GAS GEOPHYSICAL REGULATIONS

These Regulations were drafted by DIAND and EMR for promulgation under the Canada Oil and Gas Production and Conservation Act. The Regulations will pertain to onshore and offshore geophysical operations. The legislation has been designed to ensure: the safety of personnel working on geophysical crews, the protection of living resources, the quality and type of geophysical data, and its submission to relevant resource organizations. Promulgation is expected in 1979.

CANADA OIL AND GAS PRODUCTION REGULATIONS

A project was initiated by DIAND and EMR to draft regulations concerning production, pipelines, processing plant operations and other related facilities. Regulations are presently in draft form for offshore structures, production, pipelines, geophysical work and diving.

STATUS OF OIL AND GAS EXPLORATION AND PRODUCTION IN THE NWT

In 1977 one small but significant oil discovery and some gas discoveries were made in the Beaufort Sea and the Mackenzie Delta. There was also one new gas find in Yukon. Generally, the decline in exploration activity is the continuation of a trend evident since 1973.

No new disposals of oil and gas rights were made in 1977. During that year the number of permits on the mainland, Arctic islands and the Arctic coast declined by 20% compared to 1976, with a corresponding reduction of acreage by 21%. The number of leases decreased by 1% and the acreage held decreased by 3% from the 1976 level (see Table 26).

Drilling activities were concentrated in four areas: Mackenzie Delta, Mackenzie Bay, Beaufort Sea and the Sverdrup Basin of the Arctic Islands. Imperial Oil Ltd. extended their artificial island drilling operations into 14 m (47 ft.) of water in the offshore Mackenzie delta

TABLE 26
Oil and Gas Activities 1977

| Number of Permits and Leases, and Relevant Land Areas | | | |
|---|--------|-------------|---------------|
| Area and Calendar Year | Number | ha | (a.) |
| <u>Permits:</u> | | | |
| NWT Mainland | | | |
| 1977 | 1,042 | 18 588 864 | (54,934,083) |
| 1976 | 1,320 | 23 890 941 | (59,035,802) |
| Arctic Islands | | | |
| 1977 | 3,142 | 60 575 720 | (149,685,865) |
| 1976 | 3,663 | 29 784 036 | (73,597,956) |
| Arctic Coast Marine | | | |
| 1977 | 661 | 11 985 149 | (29,615,949) |
| 1976 | 854 | 16 141 380 | (39,886,219) |
| Total | | | |
| 1977 | 4,845 | 91 230 670 | (225,435,897) |
| 1976 | 5,837 | 110 284 921 | (272,519,977) |
| <u>Leases:</u> | | | |
| NWT Mainland | | | |
| 1977 | 456 | 1 078 454 | (2,664,919) |
| 1976 | 466 | 1 118 234 | (2,763,230) |
| Arctic Islands | | | |
| 1977 | 67 | 10 724 | (26,499) |
| 1976 | nil | nil | (nil) |
| Arctic Coast Marine | | | |
| 1977 | nil | nil | (nil) |
| 1976 | nil | nil | (nil) |
| Total | | | |
| 1977 | 462 | 1 084 178 | (2,691,418) |
| 1976 | 466 | 1 118 234 | (2,763,230) |

and Pan Arctic Oil continued drilling operations from man-made ice islands in the inter-island areas of the Arctic Islands. In 1977, two ice island wells were drilled in the Hecla and Drake areas off the Sabine Peninsula, Melville Island. Production of gas from the six gas wells at the Pointed Mountain gas field produced less gas than in 1976. Gas from the Pointed Mountain Field is processed at the Clarke Lake Plant at Fort Nelson, B.C. In the Norman Wells oil field in the west central part of the NWT, there were 26 out of 59 operating wells in production in 1977.

Revenues from fees, forfeitures, royalties and rentals for the fiscal year 1977-78 decreased by 11% or \$941,000 from the fiscal year of 1976-77 (see Table 27). Exploratory and development drilling expenditures for both Yukon and the NWT increased 5% to \$184 million over 1976 levels, while the total geological and geophysical expenditures decreased by 5% to \$56 million.

TABLE 27
Gross Revenues (\$) of Oil and Gas by Fiscal Year

| | 1977-78 | 1976-77 |
|---------------|--------------|--------------|
| Licence Fee | 825.00 | 3,450.00 |
| Permit Fee | - | - |
| Transfer Fee | 15,670.00 | 14,870.00 |
| Lease Fee | 6,490.00 | 3,960.00 |
| Rentals | 3,488,769.99 | 4,343,465.73 |
| Royalties | 4,624,080.66 | 4,672,663.83 |
| Forfeitures | 105,853.49 | 142,315.07 |
| Cash Bonus | - | - |
| Miscellaneous | 2,811.20 | 5,138.65 |
| Total | 8,244,500.34 | 9,185,863.28 |

Source:

Oil and Gas Activities North of 60°.

MAJOR PROPOSED DEVELOPMENTS

EASTERN ARCTIC OFFSHORE DRILLING - SOUTH DAVIS STRAIT PROJECT²

Esso Resources Canada Ltd., Aquitaine Company of Canada Ltd. and Canada Cities Services Ltd. received authority to drill exploratory wells in the southern Davis Strait in 1979. Drilling will take place during open water seasons in water depths of up to 1 829 m (6,000 ft.), using dynamically positioned drillships or semi-submersible platforms. The exploratory program is predicted to take two to three years.

The companies submitted environmental impact assessments to DIAND and FEARO in 1976. The deficiencies found in the assessments were accommodated through an EAMES program in 1977-78. The Minister of the Environment approved the proposal in November 1978, and the Minister of DIAND approved the proposal in January 1979.

EASTERN ARCTIC OFFSHORE DRILLING - NORTH DAVIS STRAIT PROJECT³

In July 1977, DIAND referred proposed drilling in the North Davis Strait to EARP for review. An Environmental Impact Assessment is expected to be submitted in 1979.

BEAUFORT SEA

Dome Petroleum Ltd. will add a fourth drillship with ice-breaker support in search of oil and gas in the Beaufort Sea in 1979.

² Based on Federal Environmental Assessment and Review Process; Register of Panel Projects and Bulletin Number 8, June 1979; Federal Environmental Assessment Review Office, Report of the Environmental Assessment Panel, Eastern Arctic Offshore Drilling - South Davis Strait Project, Environment Canada, Ministry of Supply and Services, 1978.

³ Based on FEARO, number 8, June 1979.

LANCASTER SOUND

The proposal to drill one exploratory well in 1979 in Lancaster Sound by Norlands Petroleum Ltd. was deferred until the company could demonstrate its capability to meet physical hazards and the danger of a blowout. The applicant had proposed to drill a single exploratory well to obtain geological data. Drilling was to take place in approximately 770 m (2,540 ft.) of water using a dynamically positioned drill ship.

ADMINISTRATION OF OIL AND GAS IN THE NWT

The Non-Renewable Resources Branch of DIAND is responsible for the development of programs and policies relating to the management of subsurface rights in land (oil, gas and mineral resources). The Northern Operations Branch of DIAND in Yellowknife is responsible for the operational aspects of the program. Oil and gas conservation engineers are located in Yellowknife.

Most aspects of the administration of oil and gas activities, except for field inspections, is the responsibility of headquarters staff in Ottawa-Hull. The Oil and Gas Lands Division is responsible for the disposition of oil and gas rights, issuance of agreements, permits and leases, maintenance of a registry of oil and gas rights and surveillance of royalty and other revenue functions resulting from oil and gas activities.

The Oil and Gas Resources Evaluation Division is responsible for the economic and geological appraisal of individual parcels of land and the evaluation of oil and gas potential. It assesses obligations to be met in exploratory programs, receives and monitors technical data from exploratory programs, maintains a library of exploration reports, processes data to provide information on potential reserves and land values and assists engineers of the Oil and Gas Engineering Division.

The Oil and Gas Engineering Division is responsible for DIAND's activities that are related to drilling and production techniques. It is also responsible for pollution prevention and safety aspects at drill sites. The Oil and Gas Engineering Division coordinates activities and agencies that are responsible for activities peripheral to drilling and production operations. It also ensures that oil and gas treatment plants are constructed.

The Resource Management and Conservation Branch of EMR is responsible for the administration of federal interests in the non-renewable resources of the Hudson Bay and Hudson Strait regions. The Branch issues oil and gas exploration and production licences as well as rights to other minerals, and ensures that holders of terminable grants fulfill the terms and obligations stipulated in the Regulations.

The Branch also evaluates geological and geophysical operations and assesses mineral resource potential or prospects of specific areas on Canada's east and west coasts, Hudson Bay and Hudson Strait. The Branch is responsible for the handling of lithologic and paleontologic material from wells within their jurisdiction and for the assembly and maintenance of a data bank of geological and geophysical information obtained from exploration activities within the offshore areas under their administration.

The Branch's Operations Division exercises regulatory control over all activities associated with exploration, drilling, production and conservation of offshore oil and gas under EMR administration. This function includes analysis of operational hazards, proposed equipment installations in offshore areas and the nature and economic potential of reservoirs. Operators must meet the requirements of the Division as regards personnel safety, environmental protection, prevention of pollution and waste and the conservation of resources.

THE NORTHERN PIPELINES BRANCH

The Northern Pipelines Branch serves as the focal point for the planning of transportation projects for DIAND. The Branch acts as the base for the Environmental Social Program that is concerned with research related to northern gas and oil development. The Northern Pipeline Branch has four divisions; Planning, Assessment, Public Review and Regulation.

The Northern Pipeline Agency is an administrative and operational agency created by the Northern Pipeline Act. It was initially formed to supervise the construction of the Alaska Highway pipeline. If the Dempster lateral pipeline is approved, however, the agency will be responsible for surveying and monitoring the construction of the project.

The Polar Gas application for an eastern pipeline that was filed in December 1977 and the Arctic Pilot Project that is designed to transport eastern Arctic gas by LNG tanker and pipeline to eastern Canada have also been examined by the Branch.

NATIONAL ENERGY BOARD

The National Energy Board was created by the National Energy Board Act (1959) to regulate specific areas of oil and gas, and electrical industries in the "public interest" and to advise government on the development and use of energy resources. The Board acts as a regulatory body and issues, with the approval of the Governor-in-Council, certificates of public convenience and necessity for the construction of interprovincial and international power lines. It also issues licences for the export and import of gas and the export of oil and electrical power. The Board requires adequate safety standards of construction and operation of any facility it has certified. It has the authority to regulate tolls charged by gas and oil pipeline companies to ensure that such tolls are just and reasonable.

The National Energy Board in its advisory capacity may hold inquiries into particular aspects of the energy situation and prepare reports for the information of government and of the general public. The Board also carries out studies and prepares reports at the request of the Minister. During 1977 the Board conducted public hearings regarding a pipeline to transport Mackenzie Delta gas to Canadian markets and Alaskan gas to American markets. An assessment of the technical and environmental feasibility of the Dempster Highway is expected to be submitted to the Board in 1979. The Board also reviews and approves engineering drawings and specifications, environmental reports, and monitors construction and testing of transportation systems before and during construction. This surveillance ensures compliance with rules, regulations, safety standards and environmental guidelines before issuance of a "leave-to-open" order. The Board also administers aspects of the Petroleum Administration Act, which provides for compensation regarding certain petroleum costs and for the regulation of the price of Canadian crude oil and natural gas in interprovincial and export trade.

CANADA MINING REGULATIONS⁴

The Canada Mining Regulations govern the disposal of mining rights and the management of mining operations. The Regulations detail licence requirements, marking and recording of claims, work performances, leasing conditions and production royalties. The Regulations are made pursuant

⁴ Based on Beauchamp, Land Management in the Canadian North, 1976, p. 20-25; DIAND, Procedures, Licencing Legislation and All That, 1977, p. 16-18; Katherine A. Graham, Ronald E. McEachern, C. George Miller, "The Administration of Mineral Exploration in the Yukon and Northwest Territories", 1978; DIAND, Government Activities in the North, 1977-78; DIAND, Status of Mining and Exploration North of 60°, Mines and Mineral Activities, 1977.

to provisions in the Territorial Lands Act and the Public Lands Grants Act and are subject to other Acts or Regulations governing radioactive minerals. The Mining Regulations pertain to the acquisition of rights to the subsequent exploration for, and the actual working of, all natural materials containing gold, silver, or any other naturally occurring element but exclude the working of coal, gravel, soil, peat, limestone, etc., or oil or any other related hydro-carbons. The Canada Mining Regulations are currently undergoing revision. The Mining Division of DIAND is responsible for the development and administration of mineral resources, rights and revenues.

A licence to prospect for minerals on vacant land is available to any individual over 18 years of age for a \$5 fee, or to any company licenced to conduct business in Canada that is registered with the Registrar of Companies in the NWT for a fee of \$50 (S.7,8(1,2)). A licensee prospecting in the NWT may not enter, stake, prospect or develop any lands which are occupied by buildings that are in use, or occupied by church, cemetery or burial grounds, areas covered by existing permits or claims, areas reserved for water purposes, Indian reserves, National Parks or areas specifically reserved for military or other government use (S.11).

The prospector must register a claim with the Mining Recorder in the appropriate district within 60 days and pay a recording fee of ten cents per acre. The area of the claim may not exceed 1 045 ha (2,582.5 a.) (S.12,13).

The alternative to the claim staking method is the permit system which allows for a larger tract of land to be obtained for exploration purposes, and acts as an incentive to a larger more efficient exploratory phase. The NWT is divided into "prospecting permit areas" outside of the Yellowknife area. An application can be made to the Mining Division in Ottawa for a permit which will grant the exclusive right to prospect for and develop minerals for a three-year period south of the 68th parallel, and a five-year period north of the 68th parallel (S.29(10,14)).

An application for a permit must be made between December 1 and December 31 of any year. The applicant must demonstrate his capability to develop the mineral resource, and must pay a deposit (S.29 (3)(6)). A permittee may apply to the Mining Division to group up to four prospecting permit areas within a circle having a radius of 32 km (20 mi.) (S.32(1)). The applicant must make expenditures for exploratory work in a prospecting area according to the latitude and year in the permit period (S.31(a,b)).

Following the issuance or termination of a permit the Chief of the Mining Division publishes a notice of the area in a territorial newspaper, the Canada Gazette and in the Office of the Mining Recorders (S.36(3)). The permittee may not stake claims in the original permit area for one year after the expiry date (S.36(2)). A permittee who has completed the required work may stake claims in the permit area.

Small exploration activities including prospecting or locating a mineral claim without the use of machinery do not require a land use permit under the Territorial Land Use Regulations, but large scale operations do require a land use permit.

A lease must be applied for within 30 days following the tenth anniversary of the recording of the claim (S.58(1)). If the lease is not applied for, the claim expires and the land is open for reallocation (S.58(1)(7)). A lease gives a person or company the exclusive right to explore and develop a mine. The Canada Mining Regulations allow claims to be grouped before a lease is applied for, thus enabling the representation of work done in any one claim to cover requirements on all those grouped together. The owner of contiguous mineral claims may group together an area of up to 2 090 ha (5,165 a.) for a 12-month period upon application with a \$10 fee (S.37(4)).

A mineral lease, valid for 21 years, may be renewed for a further 21-year period and thereafter, at the discretion of the Minister (S.59(1,2)). Lease rental amounts to \$1 per acre for the initial period of 21 years (S.60(1)) with a provision for a reduced rate dependent on the amount of work expended on the recorded claim held under lease (S.60.2)). The lessee must pay royalties to the government depending upon the value of output for the fiscal year. The royalty on the part of the mine's output falling between \$10,000 and \$1,000,000 is 3%; on the part between \$1,000,000 and \$5,000,000, 5%; on the part between \$5,000,000 and \$10,000,000, 6%; and thereafter, on each additional \$5,000,000 in excess of \$10,000,000, an increase of 1% to a maximum of 12% (S.65(1)).

An applicant for a lease must be a Canadian citizen, or a corporation incorporated in Canada, or a corporation listed on a recognized Canadian stock exchange with at least 50% of the issued shares owned by Canadian citizens (S.58(10)).

A mineral lease conveys the right to mine for minerals in, upon, or under the land but does not authorize right of entry on the land where surface rights have been disposed of by terminable grants (timber licence, oil and gas lease, grazing lease or coal lease). In this case arbitration procedures must be followed to obtain entry. Should a mineral lessee and Mining Recorder be unable to make arrangements with the owner of the surface lands, the two parties must select an arbitrator and a third person to be chairman of a panel of arbitration (S.71(2,3)). The panel of arbitration determines the terms on which the claim holder may enter on the surface owner's lands (S.72(3)).

The use of land for placer mining is governed in the same manner as hardrock mining. A water licence or authorization pursuant to the NIWA is required for large scale exploration efforts which use fresh water.

MINING SAFETY ORDINANCE

This Ordinance governs the operation of mines in the NWT in respect to inspection procedures and work conditions.

EXPLOSIVE USE ORDINANCE

This Ordinance deals with the use and inspection of explosives that are to be used under a mining permit.

STATUS OF MINING EXPLORATION AND DEVELOPMENT IN THE NWT

The value of mining production rose to \$274,927,000 in 1978 from \$217,874,000 in 1977, an increase of 26% over 1977 (excluding oil, gas, tungsten). In 1978, 1,722 people were employed in this industry and eight mines produced lead, zinc, gold, tungsten, silver, copper and cadmium.

MINING PRODUCTION⁵

- Pine Point Mines Ltd.

This company operates seven open-pit mines on the south shore of Great Slave Lake, 80 km (50 mi.) east of Hay River. The company milled 2 859 691 tonnes of lead zinc ore in 1978, which put the reserves at 34 019 250 tonnes (2.1% lead, 5.3% zinc). Pine Point Mines employs 572 people.

- Nanisivik Mines Ltd.

This company began production on Baffin Island, 29 km (18 mi.) north-east of Arctic Bay in 1977. The company milled 574 315 tonnes of zinc, lead, silver and cadmium ore in 1978, which put the reserves at 5 288 000 tonnes (11.5% zinc, 1.2% lead). Nanisivik employs 169 people.

⁵ Based on DIAND, North of 60° Mines and Mineral Activities, pp. 7-9.

- Giant Yellowknife Mines Ltd.

This company operates underground and open-pit mines in the immediate vicinity of Yellowknife. The company milled 359 839 tonnes of gold and silver ore in 1978, which put the reserves at 1 103 131 tonnes (9.24 grams of gold per tonne). It employs 340 people.

- Cominco Ltd. (Con-Rycon-Vol)

This company operates an underground mine, again near Yellowknife. It milled 199 562 tonnes of gold and silver ore in 1978, and has reserves of 1 496 847 tonnes (19.56 grams of gold per tonne). The company employs 272 people.

- Echo Bay Mines Ltd.

This company operates underground mines at Echo Bay and Port Radium. It milled 33 818 tonnes of silver and copper ore in 1978. An estimate of their reserves is unavailable. There are 119 employees with this company.

- Terra Mining and Exploration Ltd.

This company operates underground mines 16 km (10 mi.) south of Great Bear Lake. The company milled 33 024 tonnes of silver, copper and bismuth ore in 1978, of which 6 652 tonnes was produced from the Noret property. Exploration has confirmed uranium and silver mineralization north of the Silver Bay Mine. This company employs 53 people.

- Northrim Mines Ltd.

This company operates an underground mine 9 km (5.5 mi.) east of the Terra Mine site. The company milled 2 594 tonnes of silver, copper and bismuth ore in 1978. Production ceased at the end of May 1978. The company employed 16 people during its operation in 1978.

- Canada Tungsten Mining Corp. Ltd.

This company operates an underground mine at Tungsten. It milled 176 664 tonnes of tungsten ore in 1978, which put reserves at 3 810 156 tonnes (1.6% tungsten trioxide). The company began an expansion program in 1977 to increase the mill production rate to 1 000 tonnes per day. This expansion was completed in 1979.

MINERAL EXPLORATION⁶

Mining exploration expenditures for 1977 were about \$25 million, the same level as in 1976. Major expenditures focussed on uranium exploration, however, the number of mining claims recorded in the NWT declined quite drastically between 1977-1978 (see Table 28) due to the promulgation of new Canada Mining Regulations which increased the size of a claim block from 21 ha (52 a.) to a maximum of 1 045 ha (2,613 a.). In terms of area, however, 1978 was a record year for mining claims. A number of uranium prospects have been located in the Keewatin, the Dismal Lakes area of the Coppermine and in the northern part of the Great Bear Batholith. Little success was reported following exploration for uranium in Baffin Island, Bathurst Inlet, the East Arm-Nonacho Lake area southeast of Great Slave Lake or in the southern part of the Great Bear Batholith in the western Bear Province.

Precious metal exploration has mainly been conducted in the Great Bear Lake region and around Yellowknife. Northrim Mines has resumed development of the Silver Bay Mines on the Camsell River, and Strike Lake Resources has initiated small scale production from high grade gold quartz veins in the Beaulieu River area.

Base metal exploration was active in many of the volcanic belts in the Slave Province but major expenditures were concentrated in drill

⁶ Based on DIAND, Advisory Committee on Northern Affairs, Government Activities in the North 1977-78, 1978.

TABLE 28
Mining Claims Recorded in the NWT

| | 1977 | 1978 |
|-----------------------|--------------|--------------|
| Mackenzie | | |
| No. of Claims | 15,081 | 919 |
| Area (ha) | 315 375.75 | 727 150.97 |
| Arctic and Hudson Bay | | |
| No. of Claims | 6,682 | 796 |
| Area (ha) | 139 726.84 | 693 682.59 |
| Nahanni | | |
| No. of Claims | 827 | 37 |
| Area (ha) | 17 293.33 | 19 011.16 |
| Total Claims Recorded | 22,590 | 1,752 |
| Total Area (ha) | 472 377.92 | 1 439 844.72 |
| (a.) | 1,166,777.40 | 3,556,416.40 |

Source:

Mining Division, DIAND, Ottawa.

projects around Pine Point, on the Gayna River and along the copper belt in the Mackenzie Mountains.

LITTLE CORNWALLIS ISLAND

Arvik Ltd. on Little Cornwallis Island has not built any mineral facilities as yet, but baseline studies for an environmental assessment are underway. Operation of the zinc mine is expected to begin in 1979 or 1980.

INCENTIVE AND ASSISTANCE PROGRAMS AVAILABLE TO MINING OPERATORS

Prospectors Assistance Regulations

These Regulations provide financial assistance to qualified prospectors. In the NWT there is a Prospectors Assistance Board chaired by the Supervising Mining Recorder who administers the program. Prospectors' assistance grants of up to \$1800 are available to qualified persons who agree to spend 60 days in an approved area and maintain adequate records.

In conjunction with this program there is an assay service, whereby a maximum of 15 free assays are provided to a prospector. In addition, the government pays 50% of the cost of 10 assays per year for each prospector.

Northern Mineral Exploration Assistance Program

This program was designed to encourage mineral exploration in the territories by providing direct financial assistance. The program was suspended in 1977.

Other Assistance Programs

Other Assistance Programs designed primarily for infrastructure development (i.e. construction of roads, airstrips, etc.) are provided through the Northern Facilities Program which is discussed in Chapter XIV.

COAL LEGISLATION

Territorial Coal Regulations⁷

These Regulations have been made pursuant to the Territorial Lands Act and govern the disposition of rights to coal on territorial lands. As with other mining legislation, any person at least 18 years of age, or a corporation, may stake out a coal location as a prerequisite to applying for a coal lease or permit. The following lands, however, are not available for staking: land used as a cemetery; land within the limits of a municipality or a local improvement district; Indian Reserves; National Parks; game sanctuaries; land used for military or other public purposes; land reserved under the Dominion Water Power Act; or land lawfully occupied for mining purposes (S.5(2)). Where the surface rights of any land are owned or lawfully occupied by another, a person cannot stake an area until he has the consent of the owner or occupant, or has made a security deposit with the local mining recorder. Compensation must be made for any loss or damage to an owner or occupant caused by a person staking on this basis (S.6(1)).

The maximum area which may be staked is 259 ha (640 a.) if the developer intends to apply for a lease, or 0.4 ha (1 a.) where he intends to apply for a permit (S.7(2)).

When an area has been staked, a lease may be applied for by paying a \$5 fee, submitting a sketch of the location and paying the rental for the first year of the lease, \$1 per acre per year (S.12 and 14(1)). A 21-year renewable lease may be obtained (S.14). In addition to the annual lease rental, a royalty of 10 cents per ton of marketable coal must be paid to the federal Crown (S.15).

⁷ Based on Beauchamp, Land Management in the Canadian North, 1976, pp. 27-28; Territorial Coal Regulations 1955 consolidation amended by SOR/65-368, SOR/65-471, SOR/67-586, SOR/77-769.

A person may acquire a lease at one location only, although assignment, transfer and subletting is possible with the written permission of the Minister of DIAND (S.16 and 21(1)). The lessee must commence active operations within one year of the notification date, and he must produce a quantity of coal from the site which is specified in the notification (S.20(1)). Failure to meet the above conditions may result in cancellation of the lease (S.20(3)). Section 18 of the Regulations entitles the lessee to the coal upon or in the land included in the lease, and allows him the right to enter upon, use and occupy the surface to the extent necessary for efficient coal mining purposes. However, the lessee must compensate the owner or lawful occupant of the surface rights for any loss or damage caused by coal mining operations on the leased area.

Where coal in lesser quantities, or for shorter periods of time, is required, a permit may be required for an area not more than 0.4 ha (1 a.) (S.7(2)). The permit expires on the following March 31st, although it may be renewed for the same period of time (S.26 and 27). The right of entry to land under a permit is the same as that provided by a lease, except that the permittee may only mine coal to the maximum amount specified in the permit (S.25). A permittee is allowed only one permit at a time (S.29). A federal government department; municipal district, local improvement district or a municipality; or an educational, religious or charitable institution can be issued a permit free of charge for authorization to mine up to 90 720 kg (200,000 lb.) of coal for the applicant's own use without the payment of a royalty (S.24(2)). In isolated areas of the NWT, Indians and Eskimos may, with permission from a lands officer or RCMP officer, mine small quantities of coal free of charge without making application under the provisions of the Regulations (S.34).

An alternative to staking is allowed under the Regulations. A coal exploration licence may be issued for a three-year term for an area equal to one quarter of a claim sheet, approximately 129.5 km² (50 mi.²) (S.36 and 38). After any one of the three years of the licence term,

the licensee may stake one coal mining lease within the licence area and surrender the remainder of the area (S.41 and 45). The licensee may also apply for a lease under Section 12 of the Regulations or for a permit under Section 23 of the Regulations, at the end of any one of the three years of the licence term.

Status of Coal Mining Exploration and Development

Coal is not presently being mined in the NWT although operations have in the past occurred in the Mackenzie valley.

QUARRYING LEGISLATION

Territorial Quarrying Regulations

These Regulations deal with the disposal of limestone, granite, slate, marble, gypsum, loam, marl, gravel, sand, clay, volcanic ash or stone.

A quarrying lease may be obtained from the Land Resources Branch of DIAND within 30 days after staking the land, upon payment of a \$5 fee, and rental payment of \$1 per a. (0.4 ha) (S.6(1)). The maximum area obtainable by lease is 8 ha (20 a.) with the length of the area not more than twice its breadth (S.4(2)). A lease is issued for a 10-year period and is renewable if the lessee has complied with stated conditions (S.9). The royalty levied on sand, gravel and loam is 10 cents per cubic yard; for other materials it is 5 cents.

Any person or resident is entitled to remove 15 yd.³ of sand, gravel or stone and up to 15 yd.³ of loam from territorial lands where the surface rights of the land have not been disposed of (S.10,11). Permits are required in all cases where a resident removes more than this allotment.

Permits may be issued free of charge to federal and territorial governments and agencies, municipalities, any educational, religious or charitable institution or hospitals (S.12(2)). Permits expire when the specified amount of material has been removed, or after one year from the date of issue, whichever is sooner (S.12(2)).

Status of Quarrying Exploration and Development

Most active quarrying permits are held by oil and gas companies. An inventory of gravel sources around Tuktoyaktuk is presently being conducted.

ADMINISTRATION OF MINING IN THE NWT

The Mining Division of DIAND's Northern Non-Renewable Resources Branch is responsible for the administration of mining and mineral rights (excluding oil and gas). There are three sections in this Division: Mining Lands, Mining Geology and Mining Engineering.

For administrative purposes the NWT is divided into three mining districts - Mackenzie, Nahanni and Arctic/Hudson Bay. A mining recording staff of the Mining Lands Section is responsible for the disposition of mineral rights within each district in accordance with the applicable legislation. The Mining Recorders Office for each of the districts is located in Yellowknife. A supervising mining recorder ensures that standard practices are used in the administration of the various mining Acts and Regulations.

The mining engineering section of the mining division is responsible for the administration of appropriate safety legislation. The Regional Mining Engineer and his staff, located in Yellowknife, ensure that mining and quarrying operations are in accordance with the NWT Mining Safety Ordinance and the NWT Explosive Use Ordinance; that adequate safety training is given to mine personnel; that ventilation dirt surveys and monitoring of radioactive contamination is conducted; and that adequate safety measures are taken throughout the mining property.

The Mining Geology section, with a staff of seven geologists, provides geological services to the mineral industry. This section conducts mining property examinations, identifies specimens and advises the mineral industry, government agencies and researchers on geological problems.

ELECTRICAL POWER - NORTHERN CANADA POWER COMMISSION⁸

The Northern Canada Power Commission (NCPC) is a federal Crown Corporation which operates under the authority of the Northern Canada Power Commission Act. This Corporation primarily plans, constructs and manages electrical public utilities. The Commission is empowered to survey utility requirements, and construct utility plants in the NWT and other locations in Canada, subject to the approval of the Governor General-in-Council. The Commission operates on a self-sustaining basis and repays loans that are used to finance capital expenditure. The NWT is divided into nine administrative areas which are based on the following district offices: Inuvik, Normal Wells, Fort Simpson, Yellowknife, Fort Smith, Cambridge Bay, Rankin Inlet, Resolute Bay and Frobisher Bay.

The NCPC is the principal producer of electricity north of 60° and operates the main transmission networks in the NWT. In 1978, the Commission supplied retail electricity to 49 communities in the NWT and wholesale electricity to local distributors in Yellowknife. The Commission also supplied retail central heat, water and sewage utility services in Inuvik during the 1977-1978 fiscal year, and wholesale central heat service to the GNWT, who act as the distributor in Frobisher Bay.

The Snare Cascades hydro development project was cancelled in 1978 due to rising cost estimates and resource conflicts with the mining industry. During 1977-78, the total electrical power generated in the NWT

⁸ Based on 30th Annual Review, Northern Canada Power Commission for the year ending March 31, 1978.

was 420 million kw. Total revenue collected from the sale of electricity was \$27.7 million, an increase of 7% over the preceding year.

LAND USE ISSUES

Issues associated with energy resources, mining and quarrying include:

- Environmental impacts of large scale developments.
- Social impacts of industrial development.
- Conflicts with other resource uses. The effect on wildlife populations, particularly migratory species, of industrial development.
- Lack of an overall developmental strategy or comprehensive planning approach. EARP does not provide for an integrated and regional approach to the environmental assessment of developmental problems.
- Lack of inventory data to accurately review developmental proposals.

XIV. TRANSPORTATION¹

METHODS OF TRANSPORTATION

The primary objective of federal transportation policy regarding the NWT is to provide the least expensive, most efficient and most reliable resupply service to the northern communities; to provide access to northern communities; and to provide access to northern resources for the Canadian economy and the world market. The Canadian Transport Commission was formed under the National Transportation Act (1967) to advise the government on transportation policy and to consolidate all Regulations under one body. The national transportation policy of June 1975 emphasizes the development of the role of government in the provision of services to northern areas and the large infrastructural investment required to open up the north.

The Mackenzie Highway from Grande Prairie Alberta to Hay River is the only road link from southern Canada into the NWT. The following highways branch out from the Mackenzie Highway: the Fort Smith Highway, the Pine Point Highway, and the Fort Liard Highway (completion expected 1980). In 1972 construction was initiated to extend the Mackenzie Highway from Fort Simpson north to the community of Tuktoyaktuk on the Arctic Ocean. Due to the escalating construction costs and a change of priority, extension of the Mackenzie Highway was halted in October 1977

¹ Main sources are DIAND, "North of 60°, Northern Roads," 1977; DIAND, "Government Activities in the North 1977-78"; Transport Canada, Transportation Policy - A Framework for Transport in Canada Summary Report 1975; Kenneth Beauchamp, Land Management in the Canadian North; Iain Wallace, The Transportation Impact of the Canadian Mining Industry, Centre for Resource Studies Queen's University, 1977.

at 684 km (425 mi.), 24 km (15 mi.) south of the community of Wrigley. The Dempster Highway which originates at Dawson City in the Yukon and joins the communities of Fort McPherson, Arctic Red River and Inuvik was opened in 1979 for restricted use. Final completion of the Dempster Highway is expected by 1982. There are no new highway projects scheduled to begin in the near future.

The Great Slave Lake Railway which was built in 1961, runs north from Peace River, Alberta to Hay River. This is the only railway in the NWT, and totals 212 km (133 mi.). A 97 km (60 mi.) spur line runs east from Hay River to Pine Point.

Supply barges travel along the Mackenzie River and link with the rail terminus at Hay River. The Mackenzie River, the western part of the Arctic and Hudson Bay are all resupplied by the Northern Transportation Co. Ltd., a Crown Corporation. The eastern part of the Arctic is the responsibility of the Canadian Coast Guard. The largest airports in the NWT are located in Yellowknife, Resolute Bay, Frobisher Bay and Hay River.

ROADS

The "Roads to Resources" program was initiated in 1957 with the approval of federal expenditures totalling \$10 million per year for a period of ten years. A revised policy and program, the "Territorial Roads Policy for the Future", was initiated in 1965. This policy stated that northern development was an accepted government policy likely to be achieved only through the successful exploitation of natural resources which are mainly minerals, oil and gas. The policy advocated the development of a road network in Yukon stretching to the Mackenzie district of the NWT, to connect communities, provide east-west and north-south transportation and gradually replace seasonal water transportation. The proposal of a loop concept has ensured that resource roads would not be more than 322 km (200 mi.) from a permanent road.

An interdepartmental northern roads appraisal committee was formed under the auspices of the ACND to recommend construction priorities. This committee consisted of representatives from: the Economic Analysis Division of DIAND, TC, DPW, EMR and the GNWT. Revisions were made to the Territorial Roads Policy based on the recommendations of the 1967 Northern Roads Fact Finding Committee, an ad hoc group of public servants who attempted to clarify the transportation needs of northern residents. A new Northern Roads Policy was adopted in 1971. This policy is still in effect although it is presently under review. The NWT primary road network currently consists of 2 000 km (1,250 mi.).

The present northern roads policy establishes several categories of roads and a variety of cost sharing formulae with industry to achieve the federal government's resource development objectives. Due to budget cutbacks in the program, the need for a specific road is identified by DIAND on the basis of its merits.

There is a functional distinction between the two main classes of roads in the NWT; "communication roads" form a primary network within a region, whereas "resource roads" link promising mineral deposits and other resource areas to the primary network. Communication or network roads are funded entirely by the federal government if the distance between a potential resource site and a permanent road does not exceed 322 km (200 mi.). There is no preplanned annual budget for road construction. Applications are sent to the Northern Roads Administration and surveys are charted by a DIAND official. There are five categories of roads under this program: trunk highways, secondary roads, pioneer roads, airport roads and local roads. The lower standard lateral or resource roads operate on a cost sharing basis between the federal government and the resource developer. The governmental contribution varies in proportion to the predicted broader regional value of the route.

Preceding and complementing the evolving highway network has been the role of winter roads. Due to terrain characteristics the easiest and cheapest form of overland transportation are snow cleared ice-roads over the frozen tundra.

AIRPORTS

In 1974 the federal government adopted a new policy for the provision of air transportation services in Yukon and the NWT. Air transportation facilities will be provided to communities with over 100 people, where no other means of regular transportation is available. Airport services to all designated communities should be available by 1983.

Three types or grades of airport are designated and funded by Transport Canada: Arctic 'A', Arctic 'B', and Arctic 'C'. The extent of services offered at any airport varies with the size of the community being served. A runway of 1 829.3 m (6,000 ft.) will be provided for a major distributive, administrative or resource centre (classified as an Arctic A airport); a runway of 1 524.4 m (5,000 ft.) for population centres of more than 400 (Arctic B airport); and 914.6 m (3,000 ft.) for centres of more than 100 people (Arctic C airport). Airport lighting, approach and navigational aids, passenger aircraft and airport facilities, radio communication and meteorological facilities of varying degrees of sophistication are provided depending upon the length of the runway. In addition, the policy provides for Arctic seaplane bases and facilities where it has been determined that such facilities are economically and technically justified. Table 29 lists the standard of airport services that are to be available in NWT communities once the 1974 transportation policy is achieved.

Transport Canada (TC) is responsible for the operation and maintenance of air transport facilities and services at Arctic A airports. TC provides technical advice and training programs for people in the communities so that they may become operators at Arctic B and C airports.

TABLE 29
Classification of Airports in the NWT

| A | | B | |
|--------------------|-----------------|-------------------|--|
| Cambridge Bay | | Baker Lake | |
| Fort Simpson | | Coppermine | |
| Fort Smith | | Coral Harbour | |
| Frobisher Bay | | Hall Beach | |
| Hay River | | Rankin Inlet | |
| Inuvik | | Tuktoyaktuk | |
| Norman Wells | | | |
| Resolute | | | |
| Yellowknife | | | |
| C | | | |
| Aklavik | Fort Good Hope | Pangnirtung | |
| Arctic Bay | Fort Liard | Paulatuk | |
| Arctic Red River | Fort McPherson | Pelly Bay Mission | |
| Belcher Island | Fort Norman | Pine Point | |
| Broughton Island | Fort Providence | Pond Inlet | |
| Cape Dorset | Fort Resolution | Rae | |
| Chesterfield Inlet | Gjoa Haven | Repulse Bay | |
| Clyde River | Grise Fiord | Sachs Harbour | |
| Contwoyto | Holman Island | Snowdrift | |
| Eskimo Point | Igloolik | Spence Bay | |
| Fort Franklin | Lac la Martre | Whale Cove | |
| | Lake Harbour | Wrigley | |

Note: The above will represent airport services as they should be once the goals of the 1974 Transportation policy are attained.

Source:

Arctic Transportation Agency, Transport Canada.

Funding for B and C airports is provided for by TC through the GNWT. Local communities are responsible for the operation and maintenance of Arctic B and C airports. The cost of the program has been approximately \$100 million for Yukon and the NWT and is currently 50% complete.

MARINE AND RIVER TRANSPORTATION

The Mackenzie watershed is under federal regulatory authority through the Canadian Transportation Commission which was formed pursuant to the 1967 National Transportation Act (S.24(1)). Economic regulation of the Mackenzie River marine transportation market is conducted by the Water Transport Committee of the Canadian Transport Commission. Supplies for communities in the lower portion of the valley, DEW line sites and associated waterways (Great Bear Lake, coastline shipping from the Delta to Spence Bay) comprise the majority of shipments in the watershed. The volume of industrial freight handled by barge varies with the extent of oil and gas exploration activity in the Mackenzie area. The river does not provide low shipping costs for mining operations because of the distance from the areas of greatest mineral potential in the north and the lack of feeder road connections north of Fort Simpson. This situation could alter with the completion of the Dempster Highway from Dawson City to Arctic Red River.

The Northern Transportation Company Ltd. (NTCL) was a subsidiary of Eldorado Nuclear Ltd., until nationalized in 1944. The NTCL and Kaps, a smaller company, are the only substantial carriers able to maintain large shore-based operations along the river. NTCL specializes in shallow draught water operations, while Kaps specializes in deeper water areas with diverse shore-based facilities.

During 1977-78, 319,696 tons of marine cargo was carried, an increase of 2% over 1976. Freight in the Mackenzie sector decreased by 12,126 tons in the same period. Total logistic support for the oil and gas industry rose by 3,307 tons due to an increase in shipments to the north slope of Alaska. The volume of freight in the Keewatin District rose by 1,102 tons to a total of 25,906 tons.

The NTCL operates a fleet of three ocean-going ships, 29 tugs and 167 all-steel dual-purpose barges with capacities of 2,480 tons. Marine operations are complemented by a subsidiary of NTCL, Grimshaw Trucking and Distributing Ltd., who provide a general merchandise trucking service.

The Canadian Coast Guard coordinates and conducts annual Arctic resupply including icebreaker support for commercial shipping in the eastern Arctic, Hudson Bay and other high Arctic waters. Operations in the eastern Arctic consist mainly of resupply at isolated communities and radar defense bases.

During the 1977-78 Arctic resupply operation, 15,800 tons of cargo was delivered by 11 commercial vessels to various areas of the eastern Arctic while 42,700 tons of bulk petroleum was delivered by four tankers. A fifth tanker was chartered to carry 1,500 tons of bunker fuel to the CCG ice-breaker in the high Arctic.

MAJOR PROPOSED DEVELOPMENTS

POLAR GAS PROJECT²

The Polar Gas Consortium and Panarctic Gas Ltd. propose to construct a large diameter pipeline for transmission of natural gas from the High Arctic Islands to markets in southern Canada. The total cost for the pipeline component south from Spence Bay has been estimated to range between \$4.5 billion to \$6.2 billion. An EIS regarding this proposal has been completed and distributed to technical review agencies.

DEMPSTER PIPELINE PROJECT

Foothills Pipeline Ltd. has proposed to construct and operate a gas pipeline for transmission of Mackenzie Delta Gas to Whitehorse in Yukon.

² Based on FEARO, number 8, June 1979.

The construction of the Dempster Pipeline will probably follow the Dempster and Klondike Highways. The project was referred to FEARO in January 1978.

MACKENZIE DELTA GAS GATHERING SYSTEM³

In 1975 Imperial Oil, Gulf Oil and Shell Oil proposed the construction and operation of three gas processing plants and transportation facilities to supply a Dempster pipeline designed to move gas to southern Canadian markets. In the summer of 1977 these three projects were suspended. However, an EIS for the Imperial Oil plant at Taglu has been prepared for review by EARP. A technical review of the statement has not as yet been conducted. The estimated cost of the Taglu development is \$500 million (in 1975 dollars).

ARCTIC PILOT PROJECT⁴

Petro-Canada has designed a project to produce, liquify and transport natural gas from the Arctic to eastern Canadian and American markets. Natural gas produced at a small number of wells at Drake Point will be piped across Melville Island 160 km (100 mi.) to a liquifaction plant and port facility at Bridport Inlet. At Bridport Inlet the liquified natural gas will be transported year-round in ice-breaking ships to east coast markets. The possible location of the delivery points of the liquified natural gas carriers are on the St. Lawrence River, Quebec; Lorneville, New Brunswick; or Strait of Canso, Nova Scotia.

The project will take approximately four years to construct and will require an additional three to four years during service to perfect ice-breaking technology. The total cost of the project has been estimated at \$1.5 billion. The cost of developing the Drake Point Well

³ Based on FEARO. Register of Panel Projects and Bulletin Number 8, June 1979. Arctic Pilot Project, Petro-Canada, January 1979.

⁴ Ibid.

and associated field facilities has been estimated to be an additional \$110 million. The project is likely to be in operation for 20 years. This project was referred to EARP for consideration by Petro-Canada and DIAND in November 1977. An EIS has been prepared and circulated to government agencies for review.

AGENCIES INVOLVED IN TRANSPORTATION ADMINISTRATION IN THE NWT⁵

ARCTIC TRANSPORTATION DIRECTORATE

The Arctic Transportation Directorate promotes, coordinates and controls the multi-modal transport plans, programs, policies and activities for which TC is responsible in Yukon and the NWT. Coordination and consultation with the GNWT, industry and other organizations is carried out through the ACND and the Interdepartmental Committee on Oil.

A study of the Mackenzie Valley to identify problems and opportunities for improving the transportation of consumer and industrial goods was completed in 1977. The economic viability of resupply by air and marine is being investigated for the eastern Arctic through the Intermodal Transfer Study. The impact of transportation on the cost of living is also being reviewed. All major airlines that operate scheduled services in the NWT are participating in a study of air travel. The proposal for major channel improvements in the Mackenzie River has been postponed indefinitely due to a decline in traffic.

⁵ Based on DIAND, Advisory Committee on Northern Development, 1977-78 Government Activities in the North, 1978, pages 153-160.

HIGHWAY TRANSPORTATION

The Highway Branch (TC)

The Highway Branch evaluates federal and provincial highway programs, negotiates and manages shared-cost programs and studies the relationship of highway to other modes of transportation. The Branch is participating with the National Research Council to investigate methods of insulating highway construction on permafrost south of Inuvik.

Northern Roads and Airstrips Division - DIAND⁶

This Division has overall program and policy responsibility for the development of the road network in the north.

A plan to have the Dempster Highway maintained by a committee of territorial, native and federal representatives has been prepared and accepted in principle by DIAND. Implementation of the plan is expected in 1983. The objective of the plan is to maintain the highway on a year-round basis with minimum adverse impact on the environment.

Hire North

Hire North is an agency formed by the GNWT in 1972 to provide training and employment to native people regarding construction of the Mackenzie Highway. The agency is currently engaged in the construction of the Liard Highway.

⁶ Ibid., pp. 107-108.

DEPARTMENT OF PUBLIC WORKS⁷

The Department of Public Works (DPW) undertakes a wide range of construction and maintenance services usually at the request of other governmental departments. It has the responsibility for the development and maintenance of navigable waterways in the north. The Department provides an engineering service to DIAND for the location, design and construction of the roads program.

The Mackenzie Highway has been completed and is open for use from Fort Simpson at km 474.8 (mi. 294) to south of Wrigley at km 683.97 (mi. 426). Construction on km 684 (mi. 425) to km 1489.3 (mi. 952), i.e. to Tuktoyaktuk, has been deferred. During 1977 the section of the Dempster Highway from Fort McPherson to the Yukon boundary was completed to the grading stage. Design activities continued for the Liard Highway project, and geotechnical investigations were carried out on the Inuvik-Tuktoyaktuk road design.

The proposed major dredging program for the Mackenzie River has been postponed. Pre-engineering studies were conducted on Brabant Island in support of an environmental study for a TC wharf at Fort Providence; at Bear Island and Norman Wells for future dredging; at Sans Sault Rapids in support of navigation; at Arctic Red River for ferry-landing sites; at Wrigley for a landing site; and at Fort McPherson for a proposed wharf.

DPW continued to update the 1975 Phase II report on Shore Erosion and to monitor and test installations at Tuktoyaktuk that were installed in 1978 on behalf of Parks Canada.

⁷ Ibid., pp. 145-147.

CANADIAN AIR TRANSPORTATION ADMINISTRATION (TC)

The Canadian Air Transportation Administration (CATA) provides, operates and regulates facilities and services to support civil air transportation and related activities, and acts as an instrument of support for the achievement of economic, environmental and social objectives.

In the north, CATA provides airport facilities and air traffic control services for domestic and international airways/air routes. It also advises and assists the Arctic Transportation Directorate to establish priorities for aviation requirements in the Arctic.

CIVIL AERONAUTICS (TC)

The Civil Aeronautics Directorate is responsible for regulatory and air navigation services. The Civil Aeronautics Branch in the Pacific regional office administers the daily operation of the National Civil Aviation System, in the NWT.

AIRPORTS AND CONSTRUCTION SERVICES DIRECTORATE (TC)

The Airports and Construction Services Directorate maintains and operates the National Airports System, and plans, designs, constructs and maintains all airport facilities (except non-visual aids, air traffic services and related equipment). This Directorate plans and coordinates all activities relating to airport operations, levels of standards, services and facilities. It is also responsible for major construction and design packages for projects by regional administrators. Development of training programs, policies and standards in support of the Arctic transportation policy is carried out in conjunction with other governmental departments.

CANADIAN COAST GUARD

The Canadian Coast Guard carries out and coordinates the delivery of cargo for the Canadian government, United States Air Force units within northern Canada and Canadian commercial interests. It provides ice and routing information and icebreaker support for all vessels. It carries out environmental research and surveys, installs, operates and maintains aids to marine navigation; conducts search and rescue operations; and enforces the Navigable Waters Protection and Arctic Waters Pollution Prevention Acts in the eastern Arctic.

COMMUNICATIONS

The communications policy for the NWT and Yukon states that a minimum level of communications service should be established. The Northern Communication Assistance Program, which was established in 1977, is the major program designed to ensure a reliable long distance telephone service in the NWT. Every community is to have basic local and long distance service by 1982. Long distance links will be provided through satellite ground stations or ground based circuits. The stations will be designed to accommodate radio and television services in the future. The two major telecommunication carriers in the NWT are Canadian National Telecommunications and Bell Canada. Canadian National Telecommunications provides services to the area west of 102° latitude and Bell Canada serves locations east of 102°.

The Canadian Broadcasting Corporation Northern Service provides radio and television broadcasting services from three production centres at Yellowknife, Inuvik and Frobisher Bay. Radio transmitters are located in all communities with over 500 people (30 communities). The Northern Television Service telecasts 16 hours per day.

LAND USE ISSUES

Issues associated with transportation include:

- Environmental impacts of road construction.
- Social impacts that accompany increased access to communities once road networks are available.
- Conflicts with other land uses (for example, demand for lodges, borrow pits, service facilities, etc.) that accompany road building.

XV. SUMMARY AND CONCLUSION

SUMMARY

In the preceding chapters various issues and concerns regarding land use and land management have been identified and discussed. They are summarized below.

CHAPTER IV

Issues associated with the administration and management of land use are:

- The evolution of jurisdictional responsibilities of the federal and territorial governments is far from complete. In the interim, overlaps and conflicts arise in NWT land administration and land use management.
- Native land claims negotiations have delayed the federal land disposal policy. Consequently, the land needs of northern residents are being also delayed. Residential lands are in short supply in several NWT communities. Also, the delay in land transfers is slowing the development of territorial responsibility in NWT land administration.
- A comprehensive land use planning approach is difficult due to split federal and territorial jurisdictions.
- Rudimentary ecological data limit the effectiveness of land use management strategies.
- Uncertainty exists as to the future of "withdrawn areas". Baker Lake residents are particularly anxious about their economic prospects in view of the government's exploration of special land use regulations for the area.

CHAPTER V

Issues associated with water use are:

- The lack of sewerage facilities is a major concern of northern communities. Water-borne diseases are a serious problem in some water supplies.

- Potential conflicts may arise between competing uses for water, i.e. mining, hydro, transportation, parks, etc. To prevent such an eventuality, the federal government is encouraging watershed-wide management of water resources. The Mackenzie River Basin Study, is the first step in such a planning strategy.
- There are overlapping responsibilities of several federal agencies regarding northern water management.
- Water licence monitoring is limited by the vastness of the NWT water surface area. The Water Resources Division of DIAND is currently limited by a small staff of water use inspectors.

CHAPTER VI

Environmental issues include:

- The efforts of proposed large scale industrial development projects, particularly hydro-electric, oil and gas pipelines, offshore oil and gas drilling, mining and highway construction on the environment.
- The effects of transport, storage and disposal of hydrocarbons, chemicals and petroleum products.
- Disposal of solid wastes.
- Effects of industrial development and native harvesting on wildlife populations, for example, the Kaminuriak and Porcupine caribou herds.

CHAPTER VII

Issues related to agriculture include:

- Future agricultural developments will be determined by agricultural policies established by the GNWT.
- The lack of an infrastructure for agriculture militates against a viable agricultural sector in the NWT.

CHAPTER VIII

Issues related to forestry are:

- Environmental effects of harvesting practices.

- Regeneration techniques.
- Sporadic information as to the value, condition and present rate of harvesting of the forest resource.
- Expansion of the fire suppression service to protect newly established outpost camps.

CHAPTER IX

Issues associated with communities and economic development are:

- No overall economic development strategy for the NWT, although this is now being addressed through the General Development Agreement.
- The difficulty of assembling land for future use by communities.
- The lack of baseline information upon which to develop community development strategies.

CHAPTER X

Issues associated with tourism and recreation are:

- Delays in meeting the demands for cottage sites due to uncertainties caused by native land claim negotiations and conflicts with other resource uses.
- Development of cottage subdivisions at densities that are environmentally or aesthetically unsound.
- Lack of information concerning the recreational carrying capacity of lakes.
- Lack of information regarding tourist visitations.

CHAPTER XII

Issues associated with fish and wildlife are:

- Effects of large scale industrial projects and piecemeal development on fish and wildlife resources.
- Effects of native hunting, fishing and trapping on wildlife resources.

- Conflicts between different resource uses.
- Paucity of baseline data regarding population levels. Such data are needed if accurate species management plans are to be developed.

CHAPTER XIII

Issues associated with energy resources, mining and quarrying include:

- Environmental impacts of large scale developments.
- Social impacts of industrial development.
- Conflicts with other resource uses. The effect on wildlife populations, particularly migratory species, of industrial development.
- Lack of an overall developmental strategy or comprehensive planning approach. EARP does not provide for an integrated and regional approach to the environmental assessment of developmental problems.
- Lack of inventory data to accurately review developmental proposals.

CHAPTER XIV

Issues associated with transportation include:

- Environmental impacts of road construction.
- Social impacts that accompany increased access to communities once road networks are available.
- Conflicts with other land uses (for example, demand for lodges, borrow pits, service facilities, etc.) that accompany road building.

CONCLUSION

In perhaps the most perceptive document to date regarding public land policy in the Canadian north, Naysmith suggests that lands policy has been "... a series of responses to demands for land, rather than a framework within which decisions respecting use and management are made

on the basis of the land itself".¹ Although there are a variety of policies regarding land administration, for example, the disposition of land for cottaging and agriculture, and a variety of governmental agencies are involved in designating and managing specific areas of the NWT, there is no guiding philosophy of land management at either the territorial or federal level. This problem is a facet of the divided jurisdictional responsibility for land use policy making and management between the federal and territorial governments. Currently, the federal government has responsibility for land disposition and use in the area entirely outside of organized communities (i.e. virtually all of the NWT); whereas the territorial government has responsibility over the means of controlling or directing the use of Commissioner's lands, (i.e. the organized communities). This jurisdictional division gives rise to fractured land management.

The territorial government has been acquiring policy making authority in the fields of health, employment, recreation, economic development, etc., and is keen to expand its jurisdiction over land use management throughout the territories. In essence, authority over land use policy and provincehood are two sides of the same coin. Expanding the territory's mandate regarding land use policy making would bring the NWT much closer to provincial status. Such a decision is primarily political in nature.

DIAND is the core federal agency involved in land use policy making and management in the NWT since this agency administers the key legislation. The legislative base is designed to foster "development" with due regard to environmental protection. DIAND is, therefore, an agency that promotes economic development and, in cooperation with other federal departments, environmental protection. DIAND has the difficult task of wedding together these often conflicting goals into the federal government's avowed policy of "balanced development". The environmental conservation agencies, particularly Parks Canada and CWS, are now located

¹ Naysmith, Land Use and Public Policy in Northern Canada, p. 3.

within DOE. Proposals to conserve or preserve many areas of the NWT require agreement between these two Departments before any action can be taken. A systematic approach toward land use policy making and management is often advocated as a fundamental need in the NWT. To achieve this need, a much wider view of appropriate policy making structures is required. For example, there is no institutionalized mechanism to integrate competing views as to how land should be used. The Advisory Committee on Northern Development remains an engineering and developmentally inclined body that has no environmental sub-committee EARP, although now a statutory responsibility of the Minister of DOE under the 1979 Governmental Organization Act, is primarily a "reactive" instrument to developmental proposals from government and industry. The National Energy Board may be subject to similar criticism. The NWT needs a more open approach toward land use policy making based on greater public participation and concern regarding policy making.

Although most observers of land use policy focus on the policy itself and its implementation, greater scrutiny and questioning is required of how land use policy should and could be made. Pleas for additional data and sophisticated methodologies have validity, but the essential question that must be faced in the NWT is a processual one. How should land use policy be made and what is the best governmental structure to enable this? Perhaps more than any other region of Canada, land use issues in the NWT have a political face. Large scale resource developments, native land claims, the political maturation of the GNWT and the peculiar southern Canadian image of a "true north strong and free" combine to make land use policy and management in the NWT a very dynamic field.

Registration
SOR/77-210 4 March, 1977

TERRITORIAL LANDS ACT

Territorial Land Use Regulations

P.C. 1977-532 3 March, 1977

Enregistrement
DORS/77-210 4 mars 1977

LOI SUR LES TERRES TERRITORIALES

Règlement sur l'utilisation des terres territoriales

C.P. 1977-532 3 mars 1977

Whereas it is necessary for the protection of the ecological balance of the Yukon Territory and the Northwest Territories to set apart and appropriate each of the said Territories as separate land management zones;

And Whereas pursuant to sections 3.1 and 3.2 of the Territorial Lands Act consultations have taken place with the Council of the Yukon Territory and the Council of the Northwest Territories respecting the setting apart and appropriating of such lands as land management zones and respecting the making of the annexed regulations.

Therefore, His Excellency the Governor General in Council, on the recommendation of the Minister of Indian Affairs and Northern Development, pursuant to sections 3.1, 3.2 and 19 of the Territorial Lands Act, is pleased hereby to revoke the Territorial Land Use Regulations made by Order in Council P.C. 1971-2287 of 2nd November, 1971¹, as amended², and to make the annexed Regulations respecting land use operations in the Yukon Territory and the Northwest Territories in substitution therefor.

REGULATIONS RESPECTING LAND USE OPERATIONS IN THE YUKON TERRITORY AND THE NORTHWEST TERRITORIES

Short Title

1. These Regulations may be cited as the *Territorial Land Use Regulations*.

Interpretation

2. In these Regulations,

“Act” means the *Territorial Lands Act*; (*loi*)

“Class A Permit” means a permit issued pursuant to section 25; (*permis de catégorie A*)

“Class B Permit” means a permit issued pursuant to section 27; (*permis de catégorie B*)

“crossing” means any bridge, causeway or structure or any embankment, cutting, excavation, land clearing or other works used or intended to be used to enable persons, vehicles or machinery to cross any stream, highway or road; (*passage*)

“district oil and gas conservation engineer” means a conservation engineer appointed pursuant to the *Oil and Gas Pro-*

Vu qu'il est nécessaire pour la protection de l'équilibre écologique du territoire du Yukon et des territoires du Nord-Ouest de mettre à part et d'affecter chacun de ces territoires comme une zone séparée de gestion des terres;

Et vu qu'en vertu des articles 3.1 et 3.2 de la Loi sur les terres territoriales des consultations ont eu lieu avec le Conseil du territoire du Yukon et le Conseil des territoires du Nord-Ouest concernant la mise à part et l'affectation de ces terres comme zones de gestion des terres et concernant l'établissement des règlements ci-après.

A ces causes, sur avis conforme du ministre des Affaires indiennes et du Nord canadien et en vertu des articles 3.1, 3.2 et 19 de la Loi sur les terres territoriales, il plaît à Son Excellence le Gouverneur général en conseil d'abroger le Règlement sur l'utilisation des terres territoriales établi par le décret C.P. 1971-2287 du 2 novembre 1971¹, dans sa forme modifiée², et d'établir en remplacement le Règlement sur l'exploitation des terres dans le territoire du Yukon et les territoires du Nord-Ouest, ci-après.

RÈGLEMENT SUR L'EXPLOITATION DES TERRES DANS LE TERRITOIRE DU YUKON ET LES TERRITOIRES DU NORD-OUEST

Titre abrégé

1. Ce règlement peut s'intituler: *Règlement sur l'utilisation des terres territoriales*

Interprétation

2. S'entend par

«arpenteur en chef» l'arpenteur en chef défini dans la *Loi sur l'arpentage des terres du Canada*; (*Surveyor General*)

«borne-signal» un poteau, un jalon, une jalonnette, un monticule, une fosse, une tranchée, ou tout autre objet, chose ou moyen utilisé pour marquer officiellement la limite d'une terre arpentée ou placée ou établie à des fins topographiques, géodésiques ou cadastrales; (*monument*)

«cours d'eau» un lac, une rivière, un étang, un marais, un marécage, un canal, un ruisseau, un ravin ou un couloir au fond duquel coule de l'eau continûment ou par intermittence; (*stream*)

¹ SOR/71-580, *Canada Gazette Part II*, Vol. 105, No. 22, November 24, 1971

² SOR/75-661, *Canada Gazette Part II*, Vol. 109, No. 22, November 26, 1975

¹ DORS/71-580, *Gazette du Canada Partie II*, Vol. 105, n° 22, 24 novembre 1971

² DORS/75-661, *Gazette du Canada Partie II*, Vol. 109, n° 22, 26 novembre 1975

- duction and Conservation Act; (ingénieur de district pour la conservation du pétrole et du gaz)*
- “Dominion Geodesist” means the Dominion Geodesist and Director of the Geodetic Survey, in the Department of Energy, Mines and Resources; (*géodésien fédéral*)
- “Engineer” means, in respect of any provision of these Regulations, the Engineer designated by the Minister pursuant to section 4 for the purposes of that provision; (*ingénieur*)
- “geophysical survey” means any investigation carried out on the surface of the ground to determine the nature and structure of the subsurface; (*levé géophysique*)
- “inspector” means an inspector designated by the Minister pursuant to section 5; (*inspecteur*)
- “land use operation” means any work or undertaking on territorial lands that requires a permit; (*exploitation des terres*)
- “letter of clearance” means a letter issued by the Engineer pursuant to section 37; (*lettre d’acquiescement*)
- “line” means a route used to give surface access to any land for the purpose of carrying out a geophysical, geological or engineering survey; (*ligne de levé*)
- “man-day”, with respect to the use of a campsite, means the use of that campsite by one person for twenty-four hours; (*jour-homme*)
- “Minister” means the Minister of Indian Affairs and Northern Development; (*Ministre*)
- “monument” means any post, stake, peg, mound, pit, trench or any other object, thing or device used to officially mark the boundary of any surveyed lands, or placed or established for any topographic, geodetic or cadastral purpose; (*borne-signal*)
- “permit” means a Class A Permit or a Class B Permit; (*permis*)
- “permittee” means the holder of a permit and includes a person engaged in a land use operation or anyone employed by a permittee to conduct a land use operation; (*détenteur de permis*)
- “rig release date” means the date on which, in the opinion of a district oil and gas conservation engineer, a well drilled for the purpose of discovering or producing oil and gas has been properly terminated; (*date de renvoi de l’équipe*)
- “rock trenching” means any excavation carried out on a mineral claim for the purpose of obtaining geological information; (*forage dans le roc*)
- “spud-in” means the initial penetration of the ground for the purpose of drilling an oil or gas well; (*percée*)
- “stream” means any lake, river, pond, swamp, marsh, channel, gully, coulee or draw that continuously or intermittently contains water; (*cours d’eau*)
- “Surveyor General” means the Surveyor General as defined in the *Canada Lands Surveys Act*; (*arpenteur en chef*)
- “territorial lands” means lands in the Yukon Territory or in the Northwest Territories
- (a) that are vested in the Crown or of which the Government of Canada has power to dispose, and
- «date de renvoi de l’équipe» la date à laquelle, de l’avis de l’ingénieur de district pour la conservation du pétrole et du gaz, un puits foré dans le but de découvrir ou de produire du pétrole ou du gaz a été dûment terminé; (*rig release date*)
- «détenteur de permis» un détenteur de permis se livrant à une exploitation des terres et toute personne employée à cette fin; (*permittee*)
- «exploitation des terres» un travail ou une activité exercée sur des terres territoriales et exigeant un permis; (*land use operation*)
- «forage dans le roc» une excavation faite dans un claim minier pour obtenir des renseignements d’ordre géologique; (*rock trenching*)
- «géodésien fédéral» le géodésien fédéral et le directeur du Service géodésique du ministère de l’Énergie, des Mines et des Ressources; (*Dominion Geodesist*)
- «ingénieur» l’ingénieur nommé par le Ministre selon l’article 4; (*Engineer*)
- «ingénieur de district pour la conservation du pétrole et du gaz» un ingénieur de la conservation nommé selon la *Loi sur la production et la conservation du pétrole et du gaz*; (*district oil and gas conservation engineer*)
- «inspecteur» un inspecteur nommé par le Ministre selon l’article 5; (*inspector*)
- «jour-homme» dans le cas de l’utilisation d’un campement, l’utilisation de ce campement par une personne durant vingt-quatre heures; (*man-day*)
- «lettre d’acquiescement» une lettre délivrée par l’ingénieur selon l’article 37; (*letter of clearance*)
- «levé géophysique» une recherche effectuée à la surface du sol pour déterminer la nature et la structure sous-jacentes; (*geophysical survey*)
- «ligne de levé» une route d’accès à un terrain, utilisée pour l’exécution de levés géophysiques, géologiques ou de génie civil; (*line*)
- «loi» la *Loi sur les terres territoriales*; (*Act*)
- «Ministre» le ministre des Affaires indiennes et du Nord canadien; (*Minister*)
- «passage» un pont, une chaussée, une structure, une digue, une tranchée, une excavation, un espace libre ou autres travaux permettant ou destinés à permettre à des personnes, véhicules ou machines de franchir un cours d’eau, un chemin ou une route; (*crossing*)
- «percée» la première pénétration du sol pour le forage d’un puits de pétrole ou de gaz; (*spud-in*)
- «permis» un permis de catégorie A ou B; (*permit*)
- «permis de catégorie A» désigne un permis délivré selon l’article 25; (*Class A Permit*)
- «permis de catégorie B» un permis délivré selon l’article 27; (*Class B Permit*)
- «terres territoriales» les terres comprises dans les territoires du Nord-Ouest ou dans le territoire du Yukon
- a) dévolues à la Couronne ou dont le gouvernement du Canada a le pouvoir de disposer; et
- b) dont le Ministre a le contrôle, la gérance et l’administration.
- (*territorial lands*)

(b) that are under the control, management and administration of the Minister.

(terres territoriales)

Establishment of Land Management Zones

3. The Yukon Territory and the Northwest Territories are hereby set apart and appropriated as land management zones.

Designation of the Engineer

4. The Minister may designate any officer of the Department of Indian Affairs and Northern Development as Engineer for the purposes of any provision of these Regulations.

Designation of Inspectors

5. The Minister may designate any person as an inspector for the purposes of these Regulations.

Exemption from Regulations

6. These Regulations do not apply to

- (a) anything done by a resident of the Yukon Territory or the Northwest Territories in the normal course of hunting, fishing or trapping;
- (b) anything done in the course of prospecting, staking or locating a mineral claim unless it requires a use of equipment or material that normally requires a permit;
- (c) lands whose surface rights have all been disposed of by the Minister; or
- (d) a timber operation conducted pursuant to section 8 of the *Territorial Timber Regulations*.

7. No person shall engage in a land use operation except in accordance with these Regulations and the *Northern Inland Waters Act* and regulations made thereunder.

Prohibitions

8. No person shall, without a Class A Permit, carry on any work or undertaking on territorial lands that involves

- (a) the use, in any thirty day period, of more than 150 kg of explosives;
- (b) the use, except on a public road or trail maintained wholly or in part by federal funds, of any vehicle that exceeds 10 t net vehicle weight;
- (c) the use of any power driven machinery for earth drilling purposes whose operating weight, excluding the weight of drill rods or stems, bits, pumps and other ancillary equipment, exceeds 2.5 t;
- (d) the establishment of any campsite that is to be used for more than 400 man-days;
- (e) the establishment of any petroleum fuel storage facility exceeding 80,000 l capacity or the use of a single container for the storage of petroleum fuel that has a capacity exceeding 4,000 l;
- (f) the use of any self-propelled power driven machine for moving earth or clearing land of vegetation;

Constitution of zones de gestion des terres

3. Le territoire du Yukon et les territoires du Nord-Ouest sont mis à part et affectés à titre de zones de gestion des terres.

Nomination de l'ingénieur

4. Le Ministre peut désigner un fonctionnaire du ministère des Affaires indiennes et du Nord canadien pour agir comme ingénieur, aux fins de ce règlement.

Nomination des inspecteurs

5. Le Ministre peut désigner toute personne pour agir comme inspecteur aux fins de ce règlement.

Portée du règlement

6. Ce règlement ne s'applique pas

- a) aux activités de chasse, de pêche et de trappe exercées par un résident du territoire du Yukon ou des territoires du Nord-Ouest;
- b) aux activités de prospection, de jalonnage ou de localisation d'un claim minier, à moins qu'elles ne requièrent l'utilisation d'équipement ou de matériaux nécessitant un permis;
- c) aux terres dont tous les droits de surface ont été cédés par le Ministre; ni
- d) aux travaux de coupe de bois entrepris selon l'article 8 du *Règlement sur le bois des Territoires*.

7. Nul ne peut entreprendre l'exploitation des terres à moins de se conformer à ce règlement, à la *Loi sur les eaux intérieures du Nord* et au règlement établi selon cette loi.

Interdictions

8. Nul ne peut, sans un permis de catégorie A, entreprendre, sur des terres territoriales, un travail ou une activité impliquant

- a) l'utilisation, au cours d'une période de trente jours, de plus de 150 kg d'explosifs;
- b) l'utilisation, sauf sur une voie publique ou un sentier entretenu en totalité ou en partie à même les deniers publics, d'un véhicule de plus de 10 tonnes;
- c) l'utilisation d'une machine motorisée de forage dont le poids durant les travaux est supérieur à 2,5 tonnes, non compris le poids des tiges de forage ou des maîtresses-tiges, des trépan, des pompes et autres accessoires;
- d) l'installation d'un campement destiné à l'utilisation pour plus de 400 jours-hommes;
- e) aux fins d'entreposage du combustible, la création d'installations ayant une capacité supérieure à 80 000 litres ou l'utilisation d'un seul réservoir ayant une capacité supérieure à 4 000 litres;
- f) l'utilisation, pour le terrassement et l'essartage, d'une machine motorisée autoguidée;

(g) the use of any stationary power driven machine for hydraulic prospecting, moving earth or clearing land, other than a power saw; or

(h) the levelling, grading, clearing, cutting or snowploughing of any line, trail or right-of-way exceeding 1.5 m in width and exceeding 4 ha in area.

9. No person shall, without a Class B Permit, carry on any work or undertaking on territorial lands that involves

(a) the use, in any thirty day period, of more than 50 kg but less than 150 kg of explosives;

(b) the use, except on a public road or trail maintained wholly or in part by federal funds, of any vehicle that is more than 5 t but less than 10 t net vehicle weight, or the use of any vehicle of any weight that exerts pressure on the ground in excess of 35 k pa;

(c) the use of any power driven machinery for earth drilling purposes whose operating weight, excluding the weight of drill rods or stems and bits, pumps and other ancillary equipment, is more than 500 kg but less than 2.5 t;

(d) the establishment of any campsite that is to be used by more than two people for more than 100 but less than 400 man-days;

(e) the establishment of any petroleum fuel storage facility that has a capacity of more than 4000 l but less than 80,000 l or the use of a single container for the storage of petroleum fuel that has a capacity of more than 2000 l but less than 4000 l; or

(f) the levelling, grading, clearing, cutting or snowploughing of any line, trail or right-of-way exceeding 1.5 m in width but not exceeding 4 ha in area.

10. No permittee shall, unless expressly authorized in his permit or expressly authorized in writing by an inspector

(a) conduct a land use operation within 30 m of a known monument or a known or suspected archaeological site or burial ground;

(b) when excavating territorial land within 100 m of any stream, excavate at a point that is below the normal high water mark of that stream;

(c) deposit on the bed of any stream any excavated material; or

(d) when placing a fuel or supply cache within 100 m of any stream, place the fuel or supply cache below the normal high water mark of that stream.

Small Fuel Caches

11. Every person who establishes a fuel cache of more than 400 l and less than 4000 l on territorial land for which a permit is not required shall, within thirty days of the establishment thereof, notify the Engineer in writing, giving details of the cache including the amount and type of fuel, size of containers and method of storage and proposed date of removal of the cache.

g) l'utilisation, pour la prospection hydraulique, le terrassement et l'essartage, d'une machine fixe motorisée, autre qu'une scie mécanique; ou

h) le nivelage, le terrassement, l'essartage, l'excavation ou le déblaiement de neige d'une ligne de levé, d'un sentier ou d'une servitude de passage d'une largeur de plus 1,5 mètre et d'une superficie de plus de 4 hectares.

9. Nul ne peut, sans un permis de catégorie B, entreprendre, sur des terres territoriales, un travail ou une activité impliquant

a) l'utilisation, au cours d'une période de trente jours, de plus de 50 kg d'explosifs, sans dépasser 150 kg;

b) l'utilisation, sauf sur une voie publique ou un sentier entretenu en totalité ou en partie à même les deniers publics, d'un véhicule de plus de 5 tonnes mais de moins de 10 tonnes ou l'utilisation d'un véhicule, exerçant sur le sol une pression supérieure à 35 k pa;

c) l'utilisation d'une machine motorisée de forage dont le poids durant les travaux est supérieur à 500 kg, mais inférieur à 2.5 tonnes, non compris le poids des tiges de forage ou des maîtresses-tiges, des trépan, des pompes et autres accessoires;

d) l'installation d'un campement destiné à l'utilisation de plus de deux personnes pour plus de 100 mais moins de 400 jours-hommes;

e) aux fins d'entreposage du combustible, la création d'installations ayant une capacité supérieure à 4 000 litres, mais inférieure à 80 000 litres ou l'utilisation d'un seul réservoir ayant une capacité supérieure à 2 000 litres, mais inférieure à 4 000; ou

f) le nivelage, le terrassement, l'essartage, l'excavation ou le déblaiement de neige d'une ligne de levé, d'un sentier ou d'une servitude de passage d'une largeur de plus de 1,5 mètre et d'une superficie n'excédant pas 4 hectares.

10. Un détenteur de permis ne peut, sauf autorisation explicite du permis ou autorisation explicite écrite d'un inspecteur,

a) conduire une exploitation des terres à moins de 30 mètres d'une borne-signal connue, ou d'un gisement archéologique ou cimetière connu ou supposé;

b) de faire, à moins de 100 mètres d'un cours d'eau, sur des terres territoriales, des travaux d'excavation au-dessous du niveau normal de ses hautes eaux;

c) de déverser des déblais dans le lit d'un cours d'eau; ou

d) de déposer du combustible ou des fournitures dans une cache au-dessous du niveau normal des hautes eaux d'un cours d'eau lorsque la cache est à moins de 100 mètres de ce cours d'eau.

Cache de combustible de faible capacité

11. Une personne qui installe, sur des terres territoriales, une cache de combustible, dont la capacité est supérieure à 400 litres, mais inférieure à 4 000 litres et pour laquelle un permis n'est pas exigé en avisé par écrit l'ingénieur dans les trente jours, lui donnant les détails de la cache, y compris la quantité et le genre de combustible, la taille des réservoirs, la

méthode d'entreposage et la date prévue de l'enlèvement de la cache.

Excavation

12. Subject to the terms and conditions of his permit or the express written authority of an inspector, every permittee shall replace all materials removed by him in the course of excavating, other than rock trenching, and shall level and compact the area of the excavation.

Water Crossings

13. (1) Subject to the terms and conditions of his permit or the express written authority of an inspector, every permittee shall

(a) remove any material or debris deposited in any stream in the course of a land use operation, whether for the purpose of constructing a crossing or otherwise, and

(b) restore the channel and bed of the stream to their original alignment and cross-section,

prior to the completion of the land use operation or prior to the commencement of spring break-up, whichever occurs first.

(2) Subsection (1) shall not be deemed to permit any person to deposit any material or debris in a stream contrary to the *Northern Inland Waters Act* or the *Fisheries Act* or any regulations made under those Acts.

Clearing of Lines, Trails or Rights-of-Way

14. (1) Unless expressly authorized in a permit, no permittee shall

(a) clear a new line, trail or right-of-way where there is an existing line, trail or right-of-way that he can use;

(b) clear a line, trail or right-of-way wider than 10 m; or

(c) while clearing a line, trail or right-of-way, leave leaners or debris in standing timber.

(2) Where, in the opinion of an inspector, serious erosion may result from a land use operation, the permittee shall adopt such measures to control erosion as may be required by the inspector.

Monuments

15. (1) Where a boundary monument is damaged, destroyed, moved or altered in the course of a land use operation, the permittee shall

(a) report the fact immediately to the Surveyor General and pay to the Surveyor General the costs of

(i) investigating such damage, destruction, movement or alteration, and

(ii) restoring or re-establishing the monument to its original condition or its original place; or

(b) with the prior written consent of the Surveyor General, cause the monument to be restored or re-established at his own expense.

Excavation

12. Sous réserve de son permis ou de l'autorisation explicite écrite d'un inspecteur, un détenteur de permis procédant à une excavation qui n'est pas un forage dans le roc comble l'excavation avec les déblais qu'il veille à niveler et tasser.

Passages d'eau

13. (1) Sous réserve de son permis ou de l'autorisation explicite écrite d'un inspecteur, un détenteur de permis

a) enlève les matériaux ou débris déposés dans un cours d'eau lors de l'exploitation des terres, que ce soit pour la construction d'un passage ou autre, et

b) remet le lit du cours d'eau dans son alignement et sa coupe transversale d'origine, avant l'achèvement de l'exploitation des terres ou avant le début de la débâcle printanière, selon le premier événement.

(2) Le paragraphe (1) n'est pas réputé autoriser quiconque à déposer des matériaux ou débris dans un cours d'eau, en contravention de la *Loi sur les eaux intérieures du Nord*, de la *Loi sur les pêcheries* ou de leurs règlements respectifs.

Essartage de lignes de levé, de sentiers et de servitudes de passage

14. (1) Un détenteur de permis ne peut, sauf autorisation explicite de son permis,

a) essarter une ligne de levé, un sentier ou une servitude de passage, s'il en est de praticables;

b) essarter une ligne de levé, un sentier ou une servitude de passage d'une largeur supérieure à 10 mètres; ou

c) laisser, lors de l'essartage d'une ligne de levé, d'un sentier ou d'une servitude de passage, des débris ou des arbres inclinés parmi du bois sur pied.

(2) Lorsqu'un inspecteur est d'avis que l'exploitation des terres pourrait causer une grave érosion, il peut imposer au détenteur de permis les mesures adéquates pour l'éviter.

Bornes-signaux

15. (1) Le détenteur de permis qui, au cours de l'exploitation des terres, endommage, détruit, déplace ou modifie une borne-signal de limite

a) en informe immédiatement l'arpenteur en chef et lui paie les frais

(i) d'enquête sur les dommages, la destruction, le déplacement ou la modification, et

(ii) de remise de la borne-signal dans son état ou à son lieu d'origine; ou

b) fait remettre, à ses frais et avec le consentement préalable et écrit de l'arpenteur en chef, la borne-signal dans son état ou à son lieu d'origine.

(2) Where a topographic or geodetic monument is damaged, destroyed or altered in the course of a land use operation, the permittee shall

(a) report the fact immediately to the Dominion Geodesist, and pay to the Dominion Geodesist the costs described in subparagraphs (1)(a)(i) and (ii); or

(b) with the prior written consent of the Dominion Geodesist, cause the monument to be restored or re-established at his own expense.

(3) The restoration or re-establishment of a monument pursuant to subsection (1) or (2) shall be carried out in accordance with instructions from the Surveyor General or Dominion Geodesist, as the case may be.

Archaeological Sites

16. Where, in the course of a land use operation, a suspected archaeological site or burial ground is unearthed or otherwise discovered, the permittee shall immediately

(a) suspend the land use operation on the site; and

(b) notify the Engineer or an inspector of the location of the site and the nature of any unearthed materials, structures or artifacts.

Campsites

17. (1) Subject to the terms and conditions of his permit, every permittee shall dispose of all garbage, waste and debris from any campsite used in connection with a land use operation by removal, burning or burial or by such other method as may be directed by an inspector.

(2) Sanitary sewage produced in connection with land use operations shall be disposed of in accordance with the Public Health Ordinance of the Northwest Territories or the Public Health Ordinance of the Yukon Territory, whichever is applicable, and any regulations made under the applicable Ordinance.

Restoration of Permit Area

18. Subject to the terms and conditions of his permit, every permittee shall, after completion of a land use operation, restore the permit area as nearly as possible to the same condition as it was prior to the commencement of the land use operation.

Removal of Buildings and Equipment

19. (1) Subject to subsections (2) and (3), every permittee shall, on completion of a land use operation, remove all buildings, machinery, equipment, materials and fuel drums or other storage containers used in connection with the land use operation.

(2) A permittee may, with the prior written approval of the Engineer, leave on territorial lands such buildings, equipment, machinery and materials as the permittee deems may be required for future land use operations or other operations in the area, but any equipment, machinery or materials so left

(2) Le détenteur de permis qui, au cours de l'exploitation des terres, endommage, détruit, déplace ou modifie une borne-signal topographique ou géodésique

a) en informe immédiatement le géodésien fédéral et lui paie les frais visés aux sous-alinéas (1)a)(i) et (ii); ou

b) fait remettre, à ses frais et avec le consentement préalable et écrit du géodésien fédéral, la borne-signal dans son état ou à son lieu d'origine.

(3) La remise en état ou en place d'une borne-signal selon les paragraphes (1) et (2) est exécutée selon les directives de l'arpenteur en chef ou du géodésien fédéral, selon le cas.

Gisements archéologiques

16. Dès que, au cours d'une exploitation des terres, est soupçonnée l'exhumation ou la découverte d'un gisement archéologique ou d'un cimetière, le détenteur de permis

a) cesse l'exploitation des terres à cet endroit; et

b) avise l'ingénieur ou un inspecteur de l'emplacement du gisement et de la nature des matériaux, constructions ou objets exhumés.

Campements

17. (1) Sous réserve de son permis, un détenteur de permis qui a utilisé un campement pour une exploitation des terres, fait disparaître tous les déchets, rebuts et débris en les enlevant, en les brûlant, en les enterrant ou selon la méthode que peut imposer l'inspecteur.

(2) Les eaux-vannes résultant de l'exploitation des terres sont évacuées selon l'Ordonnance concernant l'hygiène publique des territoires du Nord-Ouest ou l'Ordonnance concernant l'hygiène publique du territoire du Yukon et leurs règlements respectifs.

Remise en état de la zone visée par un permis

18. A la fin de l'exploitation des terres et sous réserve de son permis, un détenteur de permis remet autant que possible la zone concernée dans son état initial.

Enlèvement des bâtiments et de l'équipement

19. (1) Sous réserve des paragraphes (2) et (3), un détenteur de permis enlève, à la fin de l'exploitation des terres, les bâtiments, la machinerie, les matériaux et les barils de combustible ou autres réservoirs d'entreposage utilisés pour l'exploitation.

(2) Un détenteur de permis peut, avec l'autorisation écrite et préalable de l'ingénieur, laisser sur des terres territoriales, les bâtiments, l'équipement, la machinerie et les matériaux qu'il juge indispensables pour une exploitation ultérieure des terres de la zone; dès lors, l'équipement, la machinerie et les maté-

shall be stored in a manner, at a location and for a duration approved by the Engineer.

(3) Subject to any applicable mining legislation, a permittee may, without the prior approval of the Engineer, leave diamond drill cores at a drill site on territorial lands.

Emergencies

20. Any person may, in an emergency that threatens life, property or natural environment, carry out such operation as he deems necessary to cope with the emergency, whether or not the operation is carried out in accordance with these Regulations or any permit that he may have and such person shall immediately thereafter send a written report to the Engineer describing the duration, nature and extent of the operation.

Eligibility for a Permit

21. In order to be eligible for a permit, a person shall

(a) where a right to search for, win or exploit minerals or natural resources is to be exercised by the carrying out of the land use operation authorized by the permit, be

(i) the holder of that right,

(ii) the manager of operations, where there is more than one holder of that right and such holders have entered into an exploration or operating agreement designating one of them as manager of operations, or

(iii) the person who contracts to have the land use operations carried out, where there is more than one holder of that right and they have not entered into an exploration or operating agreement designating one of them as manager of operations;

(b) where no right to search for, win or exploit minerals or natural resources is to be exercised by the carrying out of the land use operation authorized by the permit, be the person who contracts to have the land use operation carried out; or

(c) in any case not provided for in paragraph (a) or (b), be the person who is to carry out the land use operation.

Application for a Permit

22. (1) Any person who, in accordance with section 21, is eligible for a permit may submit to the Engineer, in duplicate, an application for a permit in a form approved by the Minister.

(2) Every application submitted pursuant to subsection (1) shall be accompanied by the applicable application fee and land use fee, if any, set out in the schedule and a preliminary plan showing

(a) the lands proposed to be used and an estimate of their area; and

(b) the approximate location of all

(i) existing lines, trails, rights-of-way and cleared areas proposed to be used in the land use operation,

(ii) new lines, trails, rights-of-way and cleared areas proposed to be used in the land use operation,

riaux ainsi laissés sont entreposés de la façon, à l'endroit et pour la durée qu'impose l'ingénieur.

(3) Sous réserve de toute législation minière applicable, un détenteur de permis peut laisser, sans l'approbation préalable de l'ingénieur, les carottes de foreuse à diamants dans une zone de forage des terres territoriales.

Urgences

20. Une personne peut, lors d'une urgence qui menace la vie, les biens ou l'environnement naturel, prendre les mesures qu'elle juge indispensables pour y faire face, que ces mesures soient conformes ou non à ce règlement ou au permis qu'elle détient et elle expédie sans délai à l'ingénieur un rapport écrit précisant la durée, la nature et l'étendue des mesures prises.

Éligibilité

21. Pour être éligible à un permis, une personne doit être

a) lorsque l'exploitation des terres autorisée par le permis a pour objet le droit de prospection, d'extraction ou d'exploitation des minéraux ou des ressources naturelles,

(i) le titulaire de ce droit,

(ii) s'il existe plusieurs titulaires et qu'ils ont conclu une convention d'exploration ou d'exploitation désignant l'un d'eux comme directeur des travaux, ce directeur, ou

(iii) s'il existe plusieurs titulaires et qu'ils n'ont pas conclu une telle convention, celui qui s'engage à faire exécuter l'exploitation des terres;

b) lorsque l'exploitation des terres autorisée par le permis n'a pas pour objet le droit de prospection, d'extraction ou d'exploitation des minéraux ou des ressources naturelles, celui qui s'engage à faire exécuter l'exploitation des terres; ou

c) dans tous les autres cas, celui qui doit exécuter l'exploitation des terres.

Demande de permis

22. (1) Une personne éligible à un permis selon l'article 21 peut présenter, en double exemplaire, à l'ingénieur une demande de permis en la forme approuvée par le Ministre.

(2) La demande de permis présentée selon le paragraphe (1) est accompagnée du droit applicable à la demande et, s'il y a lieu, du droit d'utilisation des terres visé à l'annexe, ainsi que d'un plan provisoire indiquant

a) les terres que le requérant se propose d'utiliser et leur superficie estimative; et

b) l'emplacement approximatif

(i) des lignes de levé, sentiers, servitudes de passage et zones essartées en existence que le requérant se propose d'utiliser lors de l'exploitation des terres,

(iii) buildings, campsites, air landing strips, air navigation aids, fuel and supply storage sites, waste disposal sites, excavations and other works and places proposed to be constructed or used during the land use operation, and
 (iv) bridges, dams, ditches, railroads, highways and roads, transmission lines, pipelines, survey lines and monuments, air landing strips, streams and all other features, structures or works that, in the opinion of the applicant, may be affected by the land use operation.

(3) For the purpose of calculating the land use fee payable where territorial lands are proposed to be used for a line, trail or right-of-way, the width of the line, trail or right-of-way shall, unless otherwise specified by the Engineer in the permit, be deemed to be 10 m.

23. (1) The Engineer may, before issuing a permit,

(a) order an inspection of the lands proposed to be used thereunder; and

(b) require an applicant for a permit to provide him with such information and data concerning the proposed use of the lands and the physical and biological characteristics thereof as will enable the Engineer to evaluate any quantitative and qualitative effects of the proposed land use operation.

(2) Where an inspector makes an inspection pursuant to an order of the Engineer under paragraph (1)(a), he shall investigate and report to the Engineer particulars of

(a) the existing biological and physical characteristics of the lands proposed to be used and the surrounding lands;

(b) any disturbance that the proposed land use operation may cause on the lands proposed to be used and the surrounding lands and the biological characteristics thereof; and

(c) the manner in which the disturbance referred to in paragraph (b) may be minimized and controlled.

(3) The Engineer may, where he deems it necessary or when requested to do so by an applicant, inform the applicant of the nature of an inspector's report referred to in subsection (2).

24. Where the Engineer receives an application for a Class A Permit that is not made in accordance with these Regulations, he shall, within ten days thereafter, notify the applicant in writing that his application cannot be accepted and give the reasons therefor.

25. (1) The Engineer shall, within ten days after receipt of an application for a Class A Permit made in accordance with these Regulations,

(a) issue a Class A Permit subject to any terms and conditions he may include therein pursuant to subsection 31(1);

(b) notify the applicant that further time is required to issue a permit and give the reasons therefor;

(ii) des nouvelles lignes de levé, nouveaux sentiers, nouvelles servitudes de passage et nouvelles zones essartées que le requérant se propose d'utiliser lors de l'exploitation des terres,

(iii) des bâtiments, campements, pistes d'atterrissage, aides à la navigation aérienne, endroits d'entreposage des combustibles et fournitures, dépotoirs, excavations et autres travaux et endroits que le requérant se propose d'aménager ou d'utiliser lors de l'exploitation des terres, et

(iv) des ponts, barrages, fossés, voies ferrées, routes, chemins, lignes de transmission, pipe-lines, lignes de levé et bornes-signaux, pistes d'atterrissage, cours d'eau et autres éléments, structures ou travaux pouvant, de l'avis du requérant, être affectés par l'exploitation des terres.

(3) La largeur des lignes de levé, des sentiers ou des servitudes de passage qui doivent être aménagés à même des terres territoriales est, aux fins du calcul du droit d'utilisation et sauf avis contraire de l'ingénieur dans le permis, censée être de 10 mètres.

23. (1) Avant de délivrer un permis, l'ingénieur peut

a) ordonner une inspection des terres que le requérant se propose d'utiliser; et

b) exiger du requérant qu'il lui fournisse des renseignements et des données sur l'utilisation projetée de terres et sur leurs caractéristiques physiques et biologiques, de façon à lui permettre de prédire les effets qualitatifs et quantitatifs de leur exploitation.

(2) L'inspecteur qui fait une inspection sur ordre de l'ingénieur selon l'alinéa (1)a) informe celui-ci des résultats de son enquête sur

a) les caractéristiques physiques et biologiques existantes des terres dont l'utilisation est projetée et des terres adjacentes;

b) la perturbation que l'exploitation envisagée des terres peut causer à ces terres et aux terres adjacentes, ainsi que les caractéristiques biologiques de cette perturbation; et

c) la façon dont la perturbation peut être réduite et contrôlée.

(3) L'ingénieur peut, lorsqu'il le juge nécessaire ou à la demande du requérant, aviser celui-ci du contenu du rapport de l'inspecteur visé au paragraphe (2).

24. Dans les dix jours de la réception d'une demande de permis de catégorie A non conforme à ce règlement, l'ingénieur donne au requérant un avis écrit et motivé du rejet de sa demande.

25. (1) Dans les dix jours de la réception d'une demande de permis de catégorie A conforme à ce règlement, l'ingénieur

a) délivre le permis sous réserve des conditions qu'il peut y énoncer, selon le paragraphe 31(1);

b) donne au requérant un avis motivé du délai supplémentaire requis pour sa délivrance;

(c) notify the applicant in writing that he has ordered further studies or investigations to be made respecting the lands proposed to be used and state the reasons therefor; or
(d) refuse to issue a permit and notify the applicant in writing of his refusal and the reasons therefor.

(2) Where the Engineer has notified an applicant that further time is required to issue a permit pursuant to paragraph (1)(b), he shall, within forty-two days after the date of receipt of the application, comply with paragraph (1)(a), (c) or (d).

(3) Where the Engineer has notified an applicant that he has ordered further studies or investigations to be made pursuant to paragraph (1)(c), he shall, within twelve months after the date of receipt of the application, comply with paragraph (1)(a) or (d).

26. Where the Engineer receives an application for a Class B Permit that is not made in accordance with these Regulations, he shall, within three days thereafter, notify the applicant in writing that his application cannot be accepted and give the reasons therefor.

27. The Engineer shall, within ten days after receipt of an application for a Class B Permit made in accordance with these Regulations,

- (a) issue a Class B Permit subject to any terms and conditions he may include therein pursuant to subsection 31(1); or
- (b) refuse to issue a permit and notify the applicant in writing of his refusal and the reasons therefor.

28. The Engineer may, where he deems it necessary, notify an applicant in writing that his application for a Class B Permit will be considered as an application for a Class A Permit.

29. The Engineer shall assign a number to each permit.

Display of Permit

30. Every permittee engaged in a work or an undertaking authorized by a permit shall display

- (a) an exact copy of the permit, including the conditions thereof, in such manner and at such places as the Engineer may require; and
- (b) the number assigned to the permit on such articles and equipment, in such manner and at such places as the Engineer may require.

Terms and Conditions of Permits

31. (1) The Engineer may include in any permit terms and conditions respecting

- (a) the location and the area of territorial lands that may be used;
- (b) the times at which any work or undertaking may be carried on;
- (c) the type and size of equipment that may be used in the land use operation;

c) donne au requérant un avis écrit et motivé à l'effet qu'il a ordonné des études ou enquêtes supplémentaires sur les terres dont l'utilisation est envisagée; ou

d) donne au requérant un avis écrit et motivé du rejet de la demande de permis.

(2) Lorsque l'ingénieur a, selon l'alinéa (1)b), avisé le requérant du délai supplémentaire requis pour la délivrance du permis, il se conforme aux alinéas 1(a), c) ou d), dans les quarante-deux jours de la réception de la demande.

(3) Lorsque l'ingénieur a, selon l'alinéa (1)c), avisé le requérant qu'il a ordonné des études ou enquêtes supplémentaires, il se conforme aux alinéas (1)a) ou d), dans les douze mois de la réception de la demande.

26. Dans les trois jours de la réception d'une demande de permis de catégorie B non conforme à ce règlement, l'ingénieur donne au requérant un avis écrit et motivé du rejet de sa demande.

27. Dans les dix jours de la réception d'une demande de permis de catégorie B conforme à ce règlement, l'ingénieur

- a) délivre le permis sous réserve des conditions qu'il peut y énoncer, selon le paragraphe 31(1); ou
- b) donne au requérant un avis écrit et motivé du rejet de la demande de permis.

28. L'ingénieur peut, lorsqu'il le juge nécessaire, aviser le requérant par écrit que sa demande de permis de catégorie B sera considérée comme une demande de permis de catégorie A.

29. L'ingénieur attribue un numéro à chaque permis.

Affichage du permis

30. Un détenteur de permis effectuant un travail ou une activité autorisée par le permis affiche

- a) une copie conforme du permis et de ses conditions, de la façon et aux endroits prescrits par l'ingénieur; et
- b) le numéro du permis sur les articles et l'équipement, de la façon et aux endroits prescrits par l'ingénieur.

Conditions des permis

31. (1) L'ingénieur peut énoncer dans un permis des conditions concernant

- a) l'emplacement et la superficie des terres territoriales pouvant être utilisées;
- b) les périodes au cours desquelles un travail ou une activité peut être exécutée;
- c) le genre et la taille de l'équipement pouvant être employé lors de l'exploitation des terres;

(d) the methods and techniques to be employed by the permittee in carrying out the land use operation;
 (e) the type, location, capacity and operation of all facilities to be used by the permittee in the land use operation;
 (f) the methods of controlling or preventing ponding of water, flooding, erosion, slides and subsidences of land;
 (g) the use, storage, handling and ultimate disposal of any chemical or toxic material to be used in the land use operation;
 (h) the protection of wildlife and fisheries habitat;
 (i) the protection of objects and places of recreational, scenic and ecological value;
 (j) the deposit of security in accordance with section 36;
 (k) the establishment of petroleum fuel storage facilities;
 (l) the methods and techniques for debris and brush disposal; and
 (m) such other matters not inconsistent with these Regulations as the Engineer thinks necessary for the protection of the biological or physical characteristics of the land management zone.

(2) The Engineer may modify any of the terms or conditions included in a permit on receipt of a written request from the permittee that sets out

- (a) the terms or conditions in the permit that the permittee wishes modified; and
- (b) the nature of the modification proposed and the reasons therefor.

(3) Where the Engineer receives a written request from a permittee pursuant to subsection (2), he shall notify the permittee of his decision and the reasons therefor within 10 days of receipt of the request.

(4) Every permit shall set out the period for which it is valid and such period shall be based on the estimated dates of commencement and completion as set out by the permittee in his application, but in no case shall a permit be valid for a period exceeding two years.

(5) On receipt of a written request from a permittee for an extension of the duration of his permit, the Engineer may extend the duration of the permit subject to such conditions not inconsistent with these Regulations as he thinks fit, for such period, not exceeding one year, as he thinks necessary to enable the permittee to complete the land use operation authorized by the permit.

Reports

32. Every permittee shall submit to the inspector or Engineer, in a form and on a date satisfactory to the inspector or Engineer, such reports as are requested by the inspector or Engineer, in order to ascertain the progress of the land use operation.

d) les méthodes et techniques que doit employer le détenteur de permis lors de l'exploitation des terres;
 e) le genre, l'emplacement, la capacité et le fonctionnement de toutes les installations que doit utiliser le détenteur de permis lors de l'exploitation des terres;
 f) les mesures préventives contre l'accumulation d'eau, l'inondation, l'érosion, les glissements et les affaissements de terrain;
 g) l'emploi, l'entreposage, la manipulation et l'élimination des matières chimiques ou toxiques, qui doivent être utilisées au cours de l'exploitation des terres;
 h) la protection de la faune terrestre et aquatique;
 i) la protection des objets et lieux qui ont une valeur récréative, panoramique et écologique;
 j) le dépôt d'une garantie selon l'article 36;
 k) la mise sur pied d'installations pour l'entreposage du combustible;
 l) les méthodes et techniques pour disposer des débris et broussailles; et
 m) d'autres matières, compatibles avec ce règlement, que l'ingénieur juge nécessaires à la protection des caractéristiques physiques et biologiques de la zone de gestion des terres.

(2) L'ingénieur peut modifier les conditions d'un permis sur réception d'une demande écrite du détenteur, énonçant

- a) les conditions du permis que le détenteur désire faire modifier; et
- b) la nature et le motif du changement proposé.

(3) Dans les dix jours de la réception de la demande visée au paragraphe (2), l'ingénieur donne au détenteur de permis un avis motivé de sa décision.

(4) Le permis indique sa période de validité n'excédant pas deux ans et fixée d'après les dates prévues dans la demande de permis pour le commencement et la fin des travaux.

(5) Sur réception d'une demande écrite d'un détenteur de permis pour la prolongation de la durée de validité de son permis, l'ingénieur peut, sous réserve des conditions qu'il juge à propos et non incompatibles avec ce règlement, accorder la prolongation, n'excédant pas un an, qu'il juge nécessaire à l'achèvement de l'exploitation des terres autorisée par le permis.

Rapports

32. Le détenteur de permis présente à l'inspecteur ou à l'ingénieur, dans la forme et aux dates qu'ils jugent satisfaisantes, les rapports qu'ils demandent afin de s'enquérir de l'avancement de l'exploitation des terres.

Final Plan

33. (1) Every permittee shall, within sixty days after the completion of a land use operation or the expiry of his permit, whichever occurs first, submit a final plan in duplicate to the Engineer showing

- (a) the lands actually subjected to the land use operation;
- (b) the location of
 - (i) lines, trails, rights-of-way and cleared areas that were used by the permittee during the land use operation, specifying those that were cleared by the permittee and those that existed before the land use operation began,
 - (ii) buildings, campsites, air landing strips, air navigation aids, fuel and supply storage sites, waste disposal sites, excavations and other works and places that were constructed or used by the permittee during the land use operation, and
 - (iii) bridges, dams, ditches, railroads, highways and roads, transmission lines, pipelines, survey lines and monuments, air landing strips, streams and all other features, structures or works that were affected by the land use operation; and
- (c) the calculations of the area of territorial lands used in the operation.

(2) The final plan submitted to the Engineer pursuant to subsection (1) shall be

- (a) certified by the permittee or his agent authorized for the purpose as to the accuracy of
 - (i) locations, distances and areas, and
 - (ii) the representation of the land use operation; or
- (b) drawn from and accompanied by positive prints of vertical aerial photographs or aerial photomosaics showing the lands subjected to the land use operation.

(3) On receipt of a written request from a permittee for an extension of the time for filing a final plan, the Engineer may extend the time for filing the final plan by not more than sixty days.

(4) The Engineer shall reject the final plan if it does not comply with this section and section 35 and the permittee shall, within three weeks after receipt of written notice from the Engineer of rejection of the plan, submit to the Engineer another final plan that complies with this section and section 35.

(5) Notwithstanding the expiry of a permit or the submission of a final plan, every permittee remains responsible for his obligations arising under the terms and conditions of the permit or under these Regulations until such time as the Engineer issues a letter of clearance for the land use operation.

Determination of Land Use Fee

34. (1) Within thirty days after the Engineer has issued a letter of clearance, the permittee shall calculate the land use fee payable based on the actual area of land used in the operation and the Engineer shall

Plan définitif

33. (1) Dans les soixante jours de l'achèvement de l'exploitation des terres ou de la date d'expiration de son permis, selon la première éventualité, le détenteur de permis présente à l'ingénieur un plan définitif, en double exemplaire, indiquant

- a) les terres effectivement sujettes à l'exploitation;
- b) l'emplacement
 - (i) des lignes de levé, sentiers, servitudes de passage et zones essartées que le détenteur a utilisés au cours de l'exploitation des terres, en précisant ceux qu'il a lui-même essartés et ceux qui existaient déjà au début de l'exploitation,
 - (ii) des bâtiments, campements, pistes d'atterrissage, aides à la navigation aérienne, endroits d'entreposage des combustibles et des fournitures, dépotoirs, excavations et autres travaux ou endroits que le détenteur a utilisés ou aménagés au cours de l'exploitation des terres, et
 - (iii) des ponts, barrages, fossés, voies ferrées, routes, chemins, lignes de transmission, pipe-lines, lignes de levé et bornes-signaux, pistes d'atterrissage, cours d'eau et autres éléments, structures ou travaux affectés par l'exploitation des terres; et
- c) les calculs de la superficie des terres territoriales utilisées dans l'exploitation.

(2) Le plan définitif présenté à l'ingénieur selon le paragraphe (1) est

- a) certifié par le détenteur du permis ou son mandataire autorisé à cette fin, quant à l'exactitude
 - (i) des emplacements, distances et superficies, et
 - (ii) de la description de l'exploitation des terres; ou
- b) tiré et accompagné de clichés positifs de photographies aériennes verticales, montrant les terres sujettes à l'exploitation.

(3) L'ingénieur peut proroger d'au plus soixante jours le délai fixé pour la présentation du plan définitif, s'il reçoit une demande écrite en ce sens, d'un détenteur de permis.

(4) L'ingénieur rejette un plan définitif non conforme à cet article et à l'article 35 et, dans les trois semaines de la réception d'un avis écrit de l'ingénieur à cet effet, le détenteur de permis lui soumet un nouveau plan définitif conforme à cet article et à l'article 35.

(5) Nonobstant l'expiration d'un permis ou la présentation d'un plan définitif, le détenteur de permis est tenu de satisfaire aux obligations énoncées dans le permis ou dans ce règlement jusqu'au moment où l'ingénieur lui délivre une lettre d'acquiescement relative à l'exploitation des terres.

Établissement du droit d'utilisation des terres

34. (1) Dans les trente jours de la délivrance par l'ingénieur d'une lettre d'acquiescement, le détenteur de permis calcule le droit d'utilisation des terres d'après la superficie réelle des terres utilisées et l'ingénieur,

(a) where the land use fee submitted with the application is greater than the fee so calculated, refund the excess to the permittee; or

(b) where the land use fee submitted with the application is less than the fee so calculated, demand, by notice in writing to the permittee, payment of the deficiency.

(2) Where an application for a permit is refused, the land use fee submitted with the application shall be refunded to the applicant.

(3) No application fee shall be refunded.

Land Division and Plans

35. Every preliminary plan or final plan submitted under these Regulations shall

(a) be drawn to a scale that clearly shows the lands that the applicant for a permit proposes to use or the permittee has used;

(b) show the scale to which the plan is drawn; and

(c) show locations

(i) in accordance with sections 5 to 9 of the *Canada Oil and Gas Land Regulations*, or

(ii) by giving the geographic co-ordinates thereof.

Security Deposit

36. (1) In order to ensure that a permittee complies with the terms and conditions of his permit and with these Regulations, the Engineer may include in the permit a condition that the permittee deposit with the Minister a security deposit not exceeding \$100,000.

(2) Where a permit includes a condition requiring a security deposit, the permittee shall not begin the land use operation until a security deposit has been deposited with the Minister.

(3) A security deposit shall be in the form of

(a) a promissory note guaranteed by a chartered bank and payable to the Receiver General;

(b) a certified cheque drawn on a chartered bank in Canada and payable to the Receiver General;

(c) bearer bonds issued or guaranteed by the Government of Canada; or

(d) a combination of the securities described in paragraphs (a) to (c).

(4) A security deposit shall be returned by the Minister when the Engineer has issued a letter of clearance in respect of the land use operation.

(5) Where a permittee has not complied with all the terms and conditions of his permit or with these Regulations, the Minister may retain such part of a security deposit as, in his opinion, the circumstances justify.

(6) Where the Minister retains all or part of a security deposit, the Minister may use all or part of the security deposit forfeited to repair or restore the land that has been damaged as a result of the land use operation.

a) lorsque le droit d'utilisation joint à la demande de permis dépasse le montant du droit ainsi calculé, rembourse le détenteur de permis du montant excédentaire; ou

b) lorsque le droit d'utilisation joint à la demande de permis est moindre que le montant du droit ainsi calculé, réclame, par un avis écrit au détenteur de permis, le montant de la différence.

(2) Lorsqu'une demande de permis est rejetée, le droit d'utilisation est remboursé au requérant.

(3) Le droit exigé pour la demande n'est pas remboursable.

Division des terres et plans

35. Un plan provisoire ou définitif présenté selon ce règlement

a) est établi à une échelle indiquant clairement les terres que le requérant d'un permis se propose d'utiliser ou que le détenteur de permis a utilisées;

b) indique l'échelle du plan; et

c) indique les emplacements

(i) selon les articles 5 à 9 du *Règlement sur les terres pétrolifères et gazifères du Canada*, ou

(ii) en donnant leurs coordonnées géographiques.

Dépôt de garantie

36. (1) Pour s'assurer que le détenteur de permis se conforme aux conditions de son permis et à ce règlement, l'ingénieur peut imposer comme condition qu'il dépose auprès du Ministre une garantie n'excédant pas \$100,000.

(2) Un détenteur de permis ne peut commencer l'exploitation des terres avant d'avoir déposé auprès du Ministre la garantie que le permis exige.

(3) Le dépôt d'une garantie se fait sous forme

a) de billet à ordre garanti par une banque à charte et payable au receveur général;

b) de chèque visé tiré sur une banque à charte canadienne et payable au receveur général;

c) d'obligations au porteur émises ou garanties par le gouvernement du Canada; ou

d) d'une combinaison des garanties décrites au alinéas a) à c).

(4) Le Ministre rembourse le dépôt de garantie lorsque l'ingénieur a délivré une lettre d'acquiescement relative à l'exploitation des terres.

(5) Lorsqu'un détenteur de permis ne s'est pas conformé à toutes les conditions de son permis ou à ce règlement, le Ministre peut retenir la partie du dépôt de garantie qu'il croit justifiée dans les circonstances.

(6) Lorsque le Ministre retient, en totalité ou en partie, le dépôt de garantie, il peut l'utiliser pour remettre en bon état le terrain endommagé par l'exploitation des terres.

Letter of Clearance

37. When the Engineer is satisfied that a permittee has complied with all the terms and conditions of his permit and with the provisions of these Regulations, he shall issue a letter of clearance to the permittee.

Duties and Powers of Inspectors

38. (1) It shall be a condition of every permit that the permittee shall permit an inspector, at any reasonable time, to enter any place or premises on territorial lands under the permittee's ownership or occupation, other than a private dwelling, and make such inspections as he thinks necessary to determine whether the terms and conditions of the permit or the provisions of these Regulations are being complied with.

(2) An inspector shall be furnished with a certificate of his appointment as an inspector and on entering any place or premises under subsection (1) shall, if so requested, produce the certificate.

(3) Every person in any place or premises entered by an inspector under subsection (1) shall give the inspector such assistance and furnish him with such information as the inspector may, for the purpose of carrying out his duties under these Regulations, reasonably require.

39. No person shall wilfully obstruct or hinder an inspector in carrying out his duties under these Regulations.

40. No person shall knowingly make a false or misleading statement either orally or in writing to an inspector engaged in carrying out his duties under these Regulations.

Suspension of a Land Use Operation

41. (1) Where an inspector is of the opinion that a permittee has failed to comply with any term or condition of his permit or any provision of these Regulations, he shall so inform the permittee and, if the default continues, the inspector may give notice to the permittee that if the default is not corrected within the time specified in the notice the inspector may order the suspension of the land use operation or any part thereof.

(2) If a permittee does not correct a default within the time specified in a notice given by an inspector under subsection (1), the inspector may order the permittee to suspend the land use operation or any part thereof and the permittee shall thereupon suspend the land use operation or part thereof until the inspector authorizes the permittee to resume the land use operation.

(3) An inspector shall authorize a permittee to resume a land use operation or part thereof suspended under subsection (2) when the inspector or the Engineer is satisfied that the default has been corrected, unless the permit has in the meantime been cancelled pursuant to section 42.

(4) Where a permittee has been informed of a default pursuant to subsection (1) or an order has been made in respect thereof pursuant to subsection (2), the Engineer may, if the permittee fails to correct the default, take such action as he deems necessary to correct the default.

Lettre d'acquiescement

37. Lorsque l'ingénieur est convaincu que le détenteur de permis s'est conformé aux conditions de son permis et à ce règlement, il lui délivre une lettre d'acquiescement.

Fonctions et pouvoirs de l'inspecteur

38. (1) Tout permis est sujet au droit d'un inspecteur de pénétrer, à tout moment raisonnable, en un lieu ou dans des locaux situés sur des terres territoriales et dont le détenteur de permis est l'occupant ou le propriétaire, sauf dans une habitation particulière, et de faire les inspections qu'il juge nécessaires pour déterminer si les conditions du permis ou les dispositions de ce règlement sont respectées.

(2) Un inspecteur est pourvu du certificat de sa nomination comme inspecteur et il l'exhibe sur demande lorsqu'il pénètre en un lieu ou dans des locaux selon le paragraphe (1).

(3) Une personne présente en un lieu ou dans des locaux visités par un inspecteur selon le paragraphe (1) lui fournit l'aide et les renseignements qu'il peut raisonnablement exiger pour exécuter ses fonctions selon ce règlement.

39. Nul ne peut nuire volontairement à un inspecteur dans l'exécution de ses fonctions selon ce règlement.

40. Nul ne peut faire verbalement ou par écrit une déclaration fausse ou trompeuse à un inspecteur exécutant ses fonctions selon ce règlement.

Suspension de l'exploitation des terres

41. (1) Lorsqu'un inspecteur est d'avis qu'un détenteur de permis ne s'est pas conformé à une condition de son permis ou à une disposition de ce règlement, il en informe le détenteur de permis et, si le manquement persiste, il peut l'aviser qu'à défaut de conformité dans le délai précisé dans l'avis, il peut suspendre une partie ou la totalité de l'exploitation des terres.

(2) Si le détenteur de permis ne se conforme pas dans le délai précisé dans l'avis donné par un inspecteur selon le paragraphe (1), l'inspecteur peut lui ordonner de suspendre une partie ou la totalité de l'exploitation des terres, et le détenteur de permis cesse alors l'exploitation jusqu'à ce que l'inspecteur l'autorise à la reprendre.

(3) L'inspecteur autorise un détenteur de permis à reprendre l'exploitation des terres suspendue selon le paragraphe (2) lorsque lui-même ou l'ingénieur s'est assuré de la correction du défaut, à moins que le permis n'ait été annulé entre temps selon l'article 42.

(4) Si, après avis d'un défaut selon le paragraphe (1) ou réception d'un ordre selon le paragraphe (2), le détenteur de permis n'a pas remédié à la situation, l'ingénieur peut prendre les mesures qu'il juge nécessaires pour y satisfaire.

(5) The costs of any action taken by the Engineer pursuant to subsection (4) may be recovered from the permittee as a debt due to the Crown.

(6) Nothing in this section relieves a permittee from prosecution for any violation of these Regulations.

(7) No order pursuant to subsection (2) shall be made in respect of an oil or gas drilling site between the time of spud-in and the rig release date without the concurrence of the district oil and gas conservation engineer.

Cancellation of Permit

42. (1) Where a land use operation has been suspended pursuant to section 41 and the permittee fails or refuses to correct his default in complying with any terms and conditions of a permit or of any provision of these Regulations, the Engineer may cancel the permit.

(2) The cancellation of a permit under subsection (1) shall not relieve the permittee from any obligation arising under the terms and conditions of the permit or under these Regulations, or from complying with any notice, direction or order given by an inspector or by the Engineer.

Discontinuance of a Land Use Operation

43. (1) Subject to subsection (2), where a permittee wishes to discontinue a land use operation at any time prior to the date of completion set out in the permit, he shall give notice of discontinuance in writing to the Engineer indicating the date upon which he proposes to discontinue the land use operation.

(2) A notice of discontinuance given pursuant to subsection (1) shall be given to the Engineer at least ten days prior to the proposed date of the discontinuance.

(3) On receipt of a notice of discontinuance, the Engineer shall amend a copy of the permit accordingly and shall forward the amended copy of the permit to the permittee.

(4) The discontinuance of a land use operation pursuant to this section does not relieve the permittee from any obligations arising under the terms and conditions of the permit or under these Regulations up to the time of discontinuance or from complying with any notice, direction or order given by an inspector or by the Engineer.

Assignment

44. (1) On receipt of an application in writing for approval of an assignment of a permit, the Engineer may approve the assignment in whole or in part.

(2) An application for approval of an assignment shall be forwarded to the Engineer at least ten days prior to the proposed effective date of the assignment and shall include the permit number of the assignor, the name and address of the proposed assignee and particulars of the interests or rights of the assignee to be benefited by the assignment of the permit.

(5) Les frais des mesures prises par l'ingénieur selon le paragraphe (4) peuvent être recouvrés du détenteur de permis à titre de créance de la Couronne.

(6) Aucune disposition de cet article ne relève un détenteur de permis des poursuites dont il est passible pour violation de ce règlement.

(7) S'il s'agit du forage d'un puits de pétrole ou de gaz, aucun ordre visé au paragraphe (2) ne peut être donné entre la percée de forage et le renvoi de l'équipe, sans l'accord de l'ingénieur de district pour la conservation du pétrole et du gaz.

Annulation du permis

42. (1) Lorsque l'exploitation des terres a été suspendue selon l'article 41 et que le détenteur de permis néglige ou refuse de remédier à son défaut de se conformer aux conditions du permis ou à ce règlement, l'ingénieur peut annuler le permis.

(2) L'annulation d'un permis selon le paragraphe (1) ne dégage pas le détenteur de permis de ses obligations découlant du permis ou de ce règlement, ni de l'obligation de se conformer à un avis, à une directive ou à un ordre reçu d'un inspecteur ou de l'ingénieur.

Cessation d'un travail d'utilisation des terres

43. (1) Sous réserve du paragraphe (2), le détenteur de permis qui désire cesser l'exploitation des terres avant la date d'achèvement visée dans le permis, en donne à l'ingénieur un avis écrit, et lui indique la date prévue de la cessation.

(2) L'avis de cessation donné selon le paragraphe (1) est donné à l'ingénieur au moins dix jours avant la date prévue de la cessation.

(3) Sur réception de l'avis de cessation, l'ingénieur modifie une copie du permis en conséquence et la transmet au détenteur de permis.

(4) La cessation de l'exploitation des terres, selon cet article, ne dégage pas le détenteur de permis de ses obligations découlant du permis ou de ce règlement, jusqu'à la date de cessation, ni de l'obligation de se conformer à un avis, à une directive ou à un ordre reçu d'un inspecteur ou de l'ingénieur.

Cession

44. (1) L'ingénieur peut approuver, en tout ou en partie, une demande écrite d'approbation de la cession d'un permis.

(2) La demande d'approbation de la cession est transmise à l'ingénieur au moins dix jours avant la date prévue de la cession et indique le numéro de permis du cédant, les nom et adresse du cessionnaire et les détails des intérêts ou droits dévolus au cessionnaire par suite de la cession.

Appeals

45. (1) An applicant for a permit or a permittee may, within thirty days after any decision, direction or order made by the Engineer or an inspector, appeal therefrom to the Minister.

(2) An appeal referred to in subsection (1) shall be by notice in writing setting forth

- (a) the decision, direction or order appealed from;
- (b) the relevant circumstances surrounding the giving of the decision, direction or order; and
- (c) the grounds of the appeal.

(3) A person appealing to the Minister pursuant to subsection (1) shall provide the Minister with such further particulars with respect to the appeal as the Minister may require.

(4) The Minister may, after receipt of an appeal pursuant to subsection (1), set aside, confirm or vary the decision, direction or order appealed from or may remit it to the Engineer for reconsideration with such instructions as the Minister deems proper.

(5) A decision, direction or order appealed from remains in full force and effect pending the decision of the Minister or an officer appointed by him pursuant to subsection (6).

(6) The Minister may authorize a senior officer of the Department of Indian Affairs and Northern Development, other than the Engineer, to exercise the Minister's powers in respect of any appeal pursuant to this section.

Notice

46. (1) Any direction, notice or order given to a permittee under these Regulations shall be sufficiently given if sent by registered mail to, or left at, the permittee's address as stated in his application for the permit and shall be deemed to have been given to the permittee on the date it was so mailed or left.

(2) Where a direction, notice or order is given to a permittee other than in writing, it shall forthwith be confirmed in writing.

SCHEDULE

Fees Payable for a Permit

1. Application fee
 - (a) Class A Permit\$20
 - (b) Class B Permit\$10
2. Land use fee where lands proposed to be used as shown on the preliminary plan exceed 2 ha, for each ha of land in excess of 2 ha
 - (a) \$20, south of the 65th parallel of north latitude; and
 - (b) \$12, north of the 65th parallel of north latitude.

Appels

45. (1) Le requérant d'un permis ou le détenteur de permis peut, dans les trente jours de la date d'une décision, d'une directive ou d'un ordre, reçus de l'ingénieur ou d'un inspecteur, en appeler au Ministre.

(2) L'appel visé au paragraphe (1) se fait par avis écrit exposant

- a) la décision, la directive ou l'ordre faisant l'objet de l'appel;
- b) les circonstances pertinentes ayant suscité la décision, la directive ou l'ordre; et
- c) les motifs de l'appel.

(3) Quiconque interjette appel au Ministre selon le paragraphe (1) lui fournit les détails supplémentaires pertinents qu'il peut exiger.

(4) Le Ministre peut, après réception d'un appel selon le paragraphe (1), annuler, confirmer ou modifier la décision, la directive ou l'ordre faisant l'objet de l'appel ou le renvoyer à l'ingénieur pour révision avec les directives qu'il juge à propos.

(5) Une décision, une directive ou un ordre faisant l'objet d'un appel reste en vigueur jusqu'à la décision du Ministre ou du fonctionnaire nommé par lui selon le paragraphe (6).

(6) Le Ministre peut autoriser un haut fonctionnaire du ministère des Affaires indiennes et du Nord canadien, sauf l'ingénieur, à exercer les pouvoirs du Ministre concernant un appel selon cet article.

Avis

46. (1) Une directive, un avis ou un ordre donné à un détenteur de permis selon ce règlement est valablement donné s'il a été expédié sous pli recommandé ou déposé à l'adresse que le détenteur de permis a déclarée dans sa demande de permis et il est censé avoir été donné au détenteur à la date de son expédition ou de son dépôt.

(2) Une directive, un avis ou un ordre donné verbalement à un détenteur de permis est immédiatement confirmé par écrit.

ANNEXE

Droits payables pour un permis

1. Droit de demande de permis
 - a) permis de catégorie A\$20
 - b) permis de catégorie B\$10
2. Lorsque les terres qu'on envisage d'utiliser selon le plan provisoire ont une superficie de plus de 2 hectares, pour chaque hectare supplémentaire, un droit d'utilisation
 - a) de \$20, au sud du 65° parallèle de latitude nord; et
 - b) de \$12, au nord du 65° parallèle de latitude nord.

APPENDIX B

POLICY OF THE GOVERNMENT FOR NORTHERN CANADA IN THE 1970s

In March 1972 the Minister of Indian Affairs and Northern Development outlined the Policy of the Government for Northern Canada in the 1970s. This policy included the following national objectives in the north:

1. to provide for a higher standard of living, quality of life and equality of opportunity for northern residents by methods which are compatible with their own preferences and aspirations;
2. to maintain and enhance the northern environment with due consideration to economic and social development;
3. to encourage viable economic development within regions of the Northern Territories so as to realize their potential contribution to the national economy and the material well-being of Canadians;
4. to realize the potential contribution of the Northern Territories to the social and cultural development of Canada;
5. to further the evolution of self-government in the Northern Territories;
6. to maintain Canadian sovereignty and security in the north; and
7. to develop fully the leisure and recreational opportunities in the Northern Territories.

APPENDIX C

ADVISORY COMMITTEE ON NORTHERN DEVELOPMENT¹

In order to provide a mechanism for interdepartmental planning and coordination of federal policies and programs related to the Canadian north, there is an Advisory Committee on Northern Development, chaired by an officer of the Department of Indian Affairs and Northern Development.

By means of a number of special committees and working groups, the Advisory Committee carries out its work and reports to the Minister of DIAND. The principal committees are: policy committee; general committee (meets two or three times per year); transportation committee; committee on science and technology; committee on northern communications; committee on the employment of native northerners; federal-territorial economic planning committee; advisory committee on industrial benefits from natural resource development; federal interdepartmental coordinating committee - Yukon (chaired by the Commissioner, comprised of senior officials of each federal department resident in Yukon); and interdepartmental advisory committee on northern roads.

In addition to the foregoing, working groups reporting to the principal committees are established as required to deal with specific tasks.

¹ Main sources are Department of Indian Affairs and Northern Development, 1977-1978 Government Activities in the North, p. 11.

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